Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.02.98 : ISO 4113

Combination No. : F 000 409 005

Injection pump

Pump designation : PES6P110A720RS3396 EP type number : F 000 400 004

Governor

Governer design. : RQV300...1300PA1379K

Governer no.

: F 000 420 504

Cust. part No. : 0280742402

Customer-spec. information

: MBB Customer

Motor : OM366LA-EURO II

Power KW

: 155.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40 : + 2.0Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : 2.3

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

: 1 680 750 015 Test lines

Outside diameter : 6.0 x inside diameter : 3.0 x length mm 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.20 : + 0.05Tolerance mm

Check

tolerance man : +- 0.10

Rack travel in mm : 21.00

: 1-5- 3- 6- 2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.00 Tolerance mm : **←** 0.05

Del. quantity

cm3/1000 strokes : 115.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: +- 4.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes	: 4.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s.	: 7.5	cm3/1000s. : +- 4.0 Spreed Tolerance
		cm3/1000 strokes : 4.0 Check tolerance
Rated speed rpm	: 300	cm3/1000s. : 7.5
Rack travel in mm	· ·	
	: ← 0.20 +	
Del. quantity	. 10.0	CONTROL LEVER
cm3/1000 strokes Tolerance	: 10.0	control lever
cm3/1000 strokes	: ← 2.5	position degree : 110.0
Check tolerance	• +	tolerance degree : + 4.0
	: ← 5.0 +	-
Spreed	†	RATED SPEED
Tolerance	. , , ,	rack travel mm : 12.90
cm3/1000 strokes Check tolerance	: 4.5	Rated speed rpm : 1340 Tolerance 1/min : +- 5
	: 7.5	Total de l'Amilia . C. J
	1	rack travel mm : 4.00
	+	Rated speed rpm : 1485
(B) SETTING OF INJ	ECTION PUMP +	Tolerance 1/min : +- 15
WITH GOVERNOR	†	
		rack travel mm : 0.50 Tolerance mm : + 0.50
GUIDE SLEEVE TRAVE	<u> </u>	Rated speed rpm : 1600
	·- +	
	: 1356	
guide sleeve	, †	
travel mm	: 9.16	I OH YOUR
Tolerance mm	: + 0.10	LOW IDLE
Rated speed rpm	: 300	
guide sleeve	+	control lever
travel mm	: 1.45	position degree : 65.0
Tolerance mm	: + 0.25	tolerance degree : + 4.0
Rated speed rpm	: 530	Setting point w/out bumper spring
guide sleeve	. / m	Rated speed rpm : 200
travel mm Tolerance mm	÷ ± 0.25	kated speed rpm : 200
TOCC: GITOC IMI	1	CRT mm min. :> 7.00
Rated speed rpm	: 1720	
guide sleeve	+	Testing:
guide steeve travel mm	13.50	Dotted arread reserves 200
Tolerance mm	: + 0.25	Rated speed rpm : 300
	I	rack travel mm : 5.60 Tolerance mm : + 0.20
FULL LOAD DELIVERY	AT FULL LOAD STOP	
	+	Rated speed rpm : 425
Rated speed rpm		
Aneroid pressure		TOPOUE CONTROL
	: 1000	TORQUE CONTROL
Del. quantity cm3/1000 strokes	· 115.5	Rated speed rpm : 1300 rack travel mm : 14.00
SHOT TOUR SETURES	113.3	Tolerance mm : + 0.05
	•	

Dated around som	. 400	Tolerance	
Rated speed rpm rack travel mm	: 13.00	+ cm3/1000 strokes	: +- 2.0
Tolerance mm		Check tolerance	: + 5.0
TO CET OF ICE THIS	. — 0.05	± cm3/1000s.	: - 5.0
Rated speed rpm	: 780	I	
rack travel mm		Aneroid pressure	
Tolerance mm		+ hPa	: 1000
		+ Rated speed rpm	: 780
Rated speed rpm	: 1000	+ rack travel mm	
rack travel mm	: 13.70	+ Tolerance mm	
Tolerance mm		+ Del. quantity	
		+ cm3/1000 strokes	: 96.0
ANEROID/ALTITUDE		+ cm3/1000 strokes	: + 2.0
COMPENSATOR TEST		+ Check tolerance	
		+ cm3/1000s.	: ← 5.0
		+	
SETTING		† 	
Dada al anti di att		+ Aneroid pressure	
Rated speed rpm	: 600	† hPa	: 1000
Pressure hPa	: 1000	Rated speed rpm	: 1000
rack travel mm		+ Del. quantity	46
Tolerance mm	: ← 0.05	+ cm3/1000 strokes	: 104.5
Dadad on a set more		+ Tolerance	
Rated speed rpm	: 600	cm3/1000 strokes	
Pressure hPa	: -	+ Check tolerance	
MC & CLUDENCY IT		+ cm3/1000s.	: ← 5.0
MEASUREMENT		<u> </u>	
Rated speed rpm	: 600	Aneroid pressure	
macca specta (pill		+ hPa	• -
Pressure hPa	: 250	Rated speed rpm	500
rack travel mm	: 0.40	+ Del. quantity	. >00
Tolerance mm	: + 0.05	+ cm3/1000 strokes	• 37.0
OCCIONC NIN	0.05	+ Tolerance	" "Jr " U
Pressure hPa	: 500	+ cm3/1000 strokes	· + 1 n
rack travel mm	: 1.70	+ Check tolerance	. 1.0
Toterance mm		+ cm3/1000s.	: + 4.0
IOCEI OLICE INN	0.10		. +- 4.0
		Spreed Tolerance	
Start interlock		- Toterarice cm3/1000 strokes	: 4.0
orair intertock		+ Check tolerance	. 4.0
Rated speed rpm	: > 100	+ cneck toterance + cm3/1000s.	: 7.5
Rated speed rpm		I constructions.	: 7.5
raten sheen thus	. \ 200	I	
Check		I	
speed 1/min	: > 80	STARTING FUEL DE	ITVERY
Check	-		mm v W111
speed 1/min	: < 220	Rated speed rpm	: 100
		rack travel mm	
		Tolerance ma	
FUEL DELIVERY CHA	RACTERISTICS	+ Del. quantity	
TEL PELEFICI UITA	10101511101110	- cm3/1000 strokes	: 83.0
		+ Tolerance	. 05.0
		יי וטנפוסונפ	
Inennid nessum			· + 10 0
	. 1000	+ cm3/1000 strokes	: ← 10.0
hPa	: 1000	cm3/1000 strokes Check tolerance	
Aneroid pressure hPa Rated speed rpm		+ cm3/1000 strokes	: ← 10.0 : ← 14.0
hPa	: 600	cm3/1000 strokes Check tolerance	

LOW IDLE

Rated speed rpm	:	300	
Rack travel in man Tolerance man	: +-	5.60 0.20	
Del. quantity cm3/1000 strokes	:	10.0	
Tolerance cm3/1000 strokes	: +-	2.5	
Check tolerance cm3/1000s.	: +-	5.0	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	4.5	
cm3/1000s.	:	7.5	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : F 000 409 105

Injection pump

Pump designation : PES6P120A120RS7350 EP type number : 0 412 726 921

Governor

Governer design. : RQV400...1150PA1376K

Governer no. : F 000 420 502

Cust. part No. : 3933298

Customer—spec. information
Customer : CUMMINS
Motor : 68TAA
Power KW : 145.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 12.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 5.75 Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 14.00 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 167.5	Tolerance mm : + 0.20
Tolerance	Rated speed rpm : 1500 guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 9.40 Tolerance mm : + 0.20
Check tolerance cm3/1000S. : +- 4.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	Rated speed rpm : 1150 Aneroid pressure
cm3/1000 strokes : 8.0	hPa : 800 Del. quantity
Check tolerance cm3/1000s. : 12.0	cm3/1000 strokes : 167.5
	- cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm : 420	- cm3/1000s. : + 4.0 - Spreed - Tolerance
Rack travel in mam: 6.10	cm3/1000 strokes : 8.0
Tolerance mm : + 0.20	Check tolerance
Del. quantity cm3/1000 strokes : 13.0 - Tolerance	- cm3/1000s. : 12.0
cm3/1000 strokes : + 3.0	
Check tolerance cm3/1000s. : +- 5.0	CONTROL LEVER
Spreed	control lever
Tolerance - 4.0 -	position degree : 118.0
Check tolerance	tolerance degree : +- 6.0
cm3/1000s. : 8.0	RATED SPEED
1	rack travel mm : 13.00 Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR -	Check
	speed 1/min : + 20
GUIDE SLEEVE TRAVEL	rack travel mm : 4.00
Rated speed rpm : 1250	Rated speed rpm : 1465 Tolerance 1/min : +- 5
guide sleeve	Check
travel mm : 7.10 - Tolerance mm : + 0.10 -	speed $1/\min$: \leftarrow 10
1	rack travel mm : 0.50
Rated speed rpm : 400	Tolerance mm : + 0.50
guide sleeve - travel mm : 1.50 -	Rated speed rpm : 1550
Tolerance mm : + 0.10	
Rated speed rpm : 800 - guide sleeve	LOW IDLE
travel mm : 4.50	
Tolerance mm : + 0.20	control loves
Rated speed rpm : 550 - guide sleeve	- control lever - position degree : 72.0 - tolerance degree : +- 6.0
travel mm : 3.30	- coverance degree O.U

Control tever un		T	
Grad tolerance degree	: 46.0 : + 6.0	Start interlock	
Setting point w/o	out bumper spring	Rated speed rpm	: > 100
Rated speed rpm	: 300	Rated speed rpm	: < 325
		Check	
CRT men main.	: > 8.90	+ speed 1/min + Check	: > 80
Testing:		speed 1/min	: < 335
Rated speed rpm	: 420		
rack travel mm Tolerance mm	: ← 0.20	+ FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 420	Aneroid pressure	
		+ hPa	: 800
TORQUE CONTROL		Rated speed rpm Del. quantity	: 800
Rated speed rpm	: 1150	cm3/1000 strokes	: 141.0
rack travel mm	: 14.00	+ Tolerance	
Rated speed rpm rack travel mm Tolerance mm	: ← 0.05	+ cm3/1000 strokes	: ← 3.0
		+ Check tolerance	
Rated speed rpm	: 800	+ cm3/1000s.	: +- 6.0
rack travel mm Tolerance mm	: 12.60	+ Spreed	
Tolerance mm	: +- 0.20	+ Tolerance	
	4000	+ cm3/1000 strokes	
Rated speed rpm rack travel mm	: 1250	+ Check tolerance	
rack travel mm	: 14.00	+ cm3/1000s.	: 12.0
Tolerance mm	: +- 0.10	Ī ——	
ANEROID/ALTITUDE		rack travel mm Tolerance mm	: 14.00
COMPENSATOR TEST		Toterance min	: +- 0.10
		Aneroid pressure	
SETTING		+ hPa	: -
	4450	Rated speed rpm	: 1150
Rated speed rpm Pressure hPa		+ Del. quantity + cm3/1000 strokes	: 80.5
rressure nra	: 800	+ Tolerance	: 60.5
Rated speed rpm	• 1150	cm3/1000 strokes	· + 20
		+ Check tolerance	
rack travel mm	: - : 9.75	+ cm3/1000s.	: ← 4.0
Tolerance mm	: +- 0.20	+	
MEASUREMENT		‡ 	
Rated speed rpm	: 1150	STARTING FUEL DEL	
		+ Rated speed rpm	: 100_
Pressure hPa	: 470	+ rack travel mm	: 13.75
rack travel mm	: 12.85	Tolerance mm	: ← 0.50
Tolerance mm	: ← 0.30	+ Del. quantity	. 455 0
Pressure hPa	: 250	+ cm3/1000 strokes + Tolerance	: 155.0
rack travel mm	: 10.85	- cm3/1000 strokes	· + 20 0
Tolerance mm	: + 0.20	+ Check tolerance	20.0
TO TOTAL TOTAL	, J. 2.20	+ cm3/1000s.	: ← 25.0
		+	

Control lever difference

LOW IDLE

Rated speed rpm	:	420	
Rack travel in mon Tolerance mmn Del. quantity		6.10 0.20	
cm3/1000 strokes	:	13.0	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s. Spreed	: +-	5.0	
Tolerance cm3/1000 strokes Check tolerance	:	4.0	
cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.02.98 : ISO 4113

Combination No. : F 000 409 106

Injection pump

Pump designation : PES6P120A120RS7416

EP type number : 0 412 726 959

6overnor

Governer design. : RQV400...1250PA1378K

Governer no. : F 000 420 503

Cust. part No. : 3933297

Customer-spec. information

Customer : CUMMINS Motor : 6BTA-A

Power KW

: 130.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

40

Test oil inlet

temp. °C

Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

: 208.5 bar

Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : ← 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 6.25 Tolerance : \leftarrow 0.50

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.65

Tolerance mm : +- 0.05

A09

Del. quantity cm3/1000 strokes : 160.5	Tolerance mm : +- 0.25
Tolerance	+ Rated speed rpm : 1690 + guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance $cm3/1000s$. : \leftarrow 4.0	CHILLOAD DELTHEDY AT EIRL LOAD STOD
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1250 Aneroid pressure hPa : 800 Del. quantity
Check tolerance cm3/1000s. : 12.0	cm3/1000 strokes : 160.5
	+ cm3/1000 strokes : + 1.0 + Check tolerance
Rated speed rpm : 420	+ cm3/1000s. : + 4.0 + Spreed + Tolerance
Rack travel in mm: 6.00	cm3/1000 strokes : 8.0 Check tolerance
Tolerance ma : + 0.10 Del. quantity	- cm3/1000s. : 12.0
cm3/1000 strokes : 15.0 Tolerance	‡
cm3/1000 strokes : +- 3.0 Check tolerance	CONTROL LEVER
cm3/1000s. : +- 5.0 Spreed	+ + control lever
Tolerance cm3/1000 strokes : 4.0	position degree : 117.0 tolerance degree : + 6.0
Check tolerance cm3/1000s. : 8.0	RATED SPEED : 12.60
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1325 Tolerance 1/min : +- 15
	rack travel mma : 4.00 Rated speed rpm : 1480
GUIDE SLEEVE TRAVEL	Tolerance 1/min : + 5
Rated speed rpm : 1329 guide sleeve travel mm : 7.83	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1550
Tolerance mm : + 0.15	‡
Rated speed rpm : 400 guide sleeve	
travel mm : 1.44 Tolerance mm : + 0.20	LOW IDLE
Rated speed rpm : 939 guide sleeve	control lever position degree : 71.0
travel mm : 5.18 Tolerance mm : + 0.25	tolerance degree : +- 6.0
Rated speed rpm : 640	Control Lever difference Grad: 46.0
guide sleeve travel mm : 3.56	tolerance degree : +- 6.0

Setting point w/o	out bumper spring	
Rated speed rpm	: 300	+ Check + speed 1/min :> 80 + Check
CRT man min.	: > 5.80	speed 1/min : < 290
Testing:		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm	: 6.00	
Tolerance mm		+ Aneroid pressure + hPa : 800
Rated speed rpm	: 425	Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 131.5
TORQUE CONTROL Rated speed rpm	• 1250	Tolerance + cm3/1000 strokes : + 3.0
rack travel mm Tolerance mm	: 13.65	Check tolerance cm3/1000s. : +- 6.0
		Spreed Tolerance
Rated speed rpm rack travel mm Tolerance mm	: 11.85 : + 0.10	cm3/1000 strokes : 8.0 Check tolerance
		cm3/1000s. : 12.0
Rated speed rpm rack travel mm Tolerance mm	: 11.60 : + 0.20	rack travel mm : 11.60
***************************************		Tolerance mm : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST		Aneroid pressure
		hPa : - Rated speed rpm : 1250
SETTING		Del. quantity cm3/1000 strokes : 88.0
Rated speed rpm Pressure hPa	: 1250 : 800	Tolerance + cm3/1000 strokes : +- 1.0
Rated speed rpm	: 1250	+ Check tolerance + cm3/1000s. : +- 4.0
Pressure hPa rack travel mm	: 9.40	‡
Tolerance mm	: + 0.20	STARTING FUEL DELIVERY
MEASUREMENT		Set starting CRT at K-cam.
Rated speed rpm		‡
Pressure hPa rack travel mm	: 340 : 12.70	+ Rated speed rpm : 100 + rack travel mm : 14.10
Tolerance mm	: + 0.30	Tolerance mm : + 0.50 Del. quantity
Pressure hPa rack travel mm Tolerance mm	: 180 : 10.50	cm3/1000 strokes : 155.0 Tolerance
Tolerance mm	: + 0.20	cm3/1000 strokes : +- 20.0 Check tolerance
Start interlock		
Rated speed rpm Rated speed rpm	: > 100 : < 280	‡

LOW IDLE

Rated speed rpm	:	420
Rack travel in mm	:	6.00
Tolerance ma	: +	- 0.10
Del. quantity cm3/1000 strokes	:	15.0
Tolerance cm3/1000 strokes	: +	- 3.0
Check tolerance	·	-
cm3/1000s.	: +	- 5.0
Spreed Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance cm3/1000s.		8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 06.02.98 Test oil : ISO 4113

Combination No. : 0 402 066 715

Injection pump

Pump designation : PES6P110A120RS3397

EP type number : 0 412 016 758

Governor

Governer design. : RSV500...1000P2A689

Governer no. : 0 421 833 611

Cust. part No. : 3930529

Customer—spec. information Customer : CDC

Motor : 6CT Power KW : 166.0

rower kw : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 8.25 Tolerance : $\leftarrow 0.50$

Check

tolerance *NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00 Difference * CS : 1.50

	+
PAOVA OPTITUO	governor spring
BASIC SETTING	<pre>pre-tension click setting x : 4.00</pre>
Rated speed rpm : 1000	
Dool Americal Street A2 70	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 12.30 Tolerance mm : + 0.05	Rated speed rpm : 1000 Aneroid pressure
Del. quantity cm3/1000 strokes : 165.5	hPa : 1500 Del. quantity
Tolerance	cm3/1000 strokes : 165.5
cm3/1000 strokes : + 1.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
Check tolerance	+ cm3/1000s. : $+$ 3.0
cn3/1000s. : + 3.0	+ Spreed + Tolerance
Spreed	+ cm3/1000 strokes : 8.0 + Check tolerance
Tolerance cm3/1000 strokes : 8.0	cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	CONTROL LEVER
. 12.0	+
	+ control lever + position degree : 99.0
Rated speed rpm : 500	tolerance degree : + 4.0
Rack travel in mm: 5.20	RATED SPEED
Tolerance man : + 0.10 Del. quantity	+ rack travel mm : 11.20 + Rated speed rpm : 1060
cm3/1000 strokes : 32.5 Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0	rack travel mm : 4.00
Check tolerance cm3/1000s. : +- 4.5	+ Rated speed rpm : 1155 + Tolerance 1/min : + 5
Spreed Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 4.0	+ Tolerance mm : + 0.55
Check tolerance cm3/1000s. : 6.5	Rated speed rpm: 1275
	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1155 + Tolerance 1/min : + 15
WITH GOVERNOR	
	İ
GUIDE SLEEVE POSITION	LOW IDLE
control lever	+ control lever
position degree : -3 Rated speed rpm : 800	position degree : 82.0 tolerance degree : +- 4.0
	+
Rack travel in mm : 0.50 Tolerance mm : + 0.20	+ Control Lever difference + Grad : 17.0

tolerance degree	: ← 6.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm	: 500 : 4.70
Rated speed rpm	: 100
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 500 : 5.20 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mem	: 750 : 13.45 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	: 900 : 13.00 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1500
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.00 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 1050 : 12.90
Tolerance mm	: +- 0.20

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 750
Del. quantity cm3/1000 strokes	: 189.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s.	: + 5.0
rack travel mm Tolerance mm	: 13.00 : + 0.20
Aneroid pressure	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 165.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/100GS.	: ← 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm	: 21.00
Tolerance mm Del. quantity	: + 0.50
cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance	: ← 20.0
cm3/1000s.	: ← 25.0
LOW IDLE	
Rated speed rpm	: 500
Rack travel in mm Tolerance mm	: 5.20 : + 0.10
Del. quantity cm3/1000 strokes	: 32.5
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000S. Spreed	: + 4.5

Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. 6.5

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 13.02.98 Test oil : ISO 4113

Combination No. : 0 402 076 817

Injection pump

Pump designation : PES6P120A720RS3367 EP type number : 0 412 026 788

Governor

Governer design. : RSV525...1000P2A640

: -1

Governer no. : 0 421 833 604

Cust. part No. : RE71286

Customer—spec. information Customer : DEERE

Motor : 6081HT001 Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.50 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 14.00 Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm Tolerance mm	: 13.20 : + 0.05
Del. quantity cm3/1000 strokes	: 179.5
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 3.0
Spreed	
Tolerance cm3/1000 strokes	: 4.0
Check tolerance cm3/1000s.	: 6.5
Rated speed rpm	: 525
Rack travel in mm Tolerance mm	: 5.10 : + 0.10
Del. quantity cm3/1000 strokes	: 26.5
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s. Spreed	: +- 4.5
Tolerance	4.0
cm3/1000 strokes Check tolerance	: 6.0
cm3/1000s.	: 8.0
(B) SETTING OF INJ WITH GOVERNOR	JECTION PUMP
GUIDE SLEEVE POSIT	TION
control lever position degree Rated speed rpm	: - 3 : 800
Rack travel in mm Tolerance mm	: 0.50 : + 0.20
governor spring pre-tension click setting x	: 2.50

FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm	: 1000
Aneroid pressure	
hPa	: 1400
Del. quantity	
cm3/1000 strokes	: 179.5
Tolerance	
cm3/1000 strokes	: ← 1.0
Check tolerance	
cm3/1000s.	: ← 3.0
Spreed Tolerance	
cm3/1000 strokes	: 4.0
Check tolerance	. 4.0
cm3/1000s.	: 6.5
CIAC/ 10000.	. 0.9
CONTROL LEVER	
control lever	
position degree	: 87.5
tolerance degree	: ← 4.0
RATED SPEED	40.00
rack travel mm	: 12.20
Rated speed rpm Tolerance 1/min	: 1065 :
loterance (/min	; —
rack travel mm	: 4.00
Rated speed rpm	: 1115
Tolerance 1/min	: +- 5
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 1200
nock tooked me	. 4.00
rack travel mm	: 4.00 : 1115
Rated speed rpm Tolerance 1/min	: +- 15
INTERBING IVERIL	• ' 1)
LOW IDLE	
COM TACE	
control lever	
position degree tolerance degree	: 70.0
tolerance degree	: +- 4.0
Setting point w/c	out bumper spring
-5003	ander ohilia

: 525 : 4.60 : + 0.10

Rated speed rpm : rack travel mm :

Tolerance mm

Rated speed rom : 100 Check tolerance cm3/1000s. : **←** 4.0 CRT am min. : > 19.00 Testing: Aneroid pressure hPa Rated speed rpm 525 Rated speed rpm 500 Del. quantity cm3/1000 strokes : 165.0 5.10 rack travel min : + 0.10Tolerance mm Tolerance cm3/1000 strokes : +-2.0 TORQUE CONTROL Check tolerance Rated speed rom : 1000 cm3/1000s. 4.0 rack travel mm 13.20 Tolerance man : + 0.05 : 700 14.00 0.10 Rated speed rpm STARTING FUEL DELIVERY rack travel nm : Tolerance mm Rated speed rpm 100 rack travel mm : 20.50 Tolerance mm : **←** 0.50 ANEROID/ALTITUDE Del. quantity COMPENSATOR TEST cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : + 20.0 SETTING Check tolerance cm3/1000s. : +- 25.0 Rated speed rpm : 500 Pressure hPa 500 Rated speed rpm : Pressure hPa LOW IDLE 12,25 rack travel mm : ← 0.10 Tolerance mm Rated speed rpm : 525 MEASUREMENT Rack travel in mm: 5.10 Tolerance mm : \leftarrow 0.10 500 Rated speed rom : Del. quantity cm3/1000 strokes : 26.5 Pressure hPa 975 Tolerance rack travel mm 13.40 cm3/1000 strokes : +- 2.0: **←** 0.20 Tolerance mm Check tolerance cm3/1000s. 4.5 Pressure hPa 830 Spreed rack travel mm 12.70 Tolerance cm3/1000 strokes : : **←** 0.05 Tolerance mm 6.0 Check tolerance cm3/1000s. : 8.0 FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1400 End of test specification sheet hPa Rated speed rpm 700 Del. quantity cm3/1000 strokes : 199.5 Tolerance

cm3/1000 strokes : + 2.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.05.96 : ISO 4113 Test oil

Combination No. : 0 402 736 864

Injection pump

Pump designation : PES6P120A120RS7349 EP type number : 0 412 726 920

Gavernor

Governer design. : RQV400...1150PA1169K

Governer no. : 0 421 815 435

Cust. part No. : 3928150

Customer-spec. information Customer : CDC Motor : 6BTA-A : 171.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 har Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Ourtside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check tolerance mm : + 0.10

Rack travel in mm: 12.50 Tolerance mm : **←** 0.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 6.25 Tolerance : +- 0.50 Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 14.85 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 194.5	Tolerance mm : + 0.25 Rated speed rpm : 1700
Tolerance cm3/1000 strokes : + 1.0	guide sleeve + travel mm : 11,50
Check tolerance cm3/1000s. : + 4.0	Tolerance mm : + 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance . 8.0	control lever position degree : MAx Rated speed rpm : 1390
Check tolerance cm3/1000s. : 12.0	Rack travel in mm : 13.40
Rated speed rpm : 420	FULL LOAD DELIVERY AT FULL LOAD STOP
rided apola (Ma . 100	+ Rated speed rpm : 1150
Rack travel in mm: 5.90	+ Aneroid pressure
Tolerance mm : + 0.20	+ hPa : 1200
Del. quantity cm3/1000 strokes : 16.5	Del. quantity
Tolerance	+ cm3/1000 strokes : 194.5 + Tolerance
cm3/1000 strokes : + 3.0	- cm3/1000 strokes : +- 1.0
Check tolerance	+ Check tolerance
cm3/1000s. : +- 5.0 Spreed	- cm3/1000s. : +- 4.0 - Spreed
Tolerance	Tolerance
cm3/1000 strokes : 4.0	+ cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : 8.0	Check tolerance cm3/1000s. : 12.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
	+
	- control lever
GUIDE SLEEVE TRAVEL	position degree : 120.0
Rated speed rpm : 1327	tolerance degree : + 6.0
guide steeve	RATED SPEED
travel mm : 7.76	+ rack travel mm : 13.40
Tolerance mm : + 0.15	Rated speed rpm : 1310
	+ Tolerance 1/min : + 15
Rated speed rpm : 400	+
guide sleeve travel mm : 1.39	+ rack travel mm : 4.00 + Rated speed rpm : 1485
Tolerance man : +- 0.20	Rated speed rpm : 1485 Tolerance 1/min : + 5
105010100 100 0 1 0 60	Total and Intill
Rated speed rpm : 869	rack travel mm : 0.50
guide sleeve	+ Tolerance mm : + 0.50
travel mm : 4.79	+ Rated speed rpm : 1550
Tolerance mm : + 0.25	†
Rated speed rpm : 540 guide sleeve	Ŧ
travel man : 3.27	LOW IDLE
U. W. C. 1000	1

control lever position degree tolerance degree	: 73.0 : + 6.0
Control lever dif Grad tolerance degree	: 47.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 300
CRT mmm min.	: > 9.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Raited speed rpm	: 425
TORQUE CONTROL Rated speed rpm rack travel man Tolerance man	
Rated speed rpm rack travel man Tolerance man	: 800 : 14.00 : + 0.20
Rated speed rpm rack travel man Tolerance man	: 1250 : 14.50 : + 0.10
Rated speed rpm rack travel man Tolerance man	: 900 : 14.20 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 600 : 13.40 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Dotad speed see	. 1150

Pressure hPa	:	1200
Rated speed rpm Pressure hPa	:	1150
rack travel mm	:	10.30
Tolerance mm	: -	

MEASUREMENT	
Rated speed rpm	: 1150
Pressure hPa rack travel mm Tolerance mm	: 645 : 13.50 : ← 0.30
Pressure hPa rack travel mm Tolerance mm	: 355 : 11.35 : + 0.20
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 315
Check speed 1/min Check	: > 80
speed 1/min	: < 325
FUEL DELIVERY CHA	RACTERISTICS
rack travel mm Tolerance mm	: 14.50 : + 0.10
Aneroid pressure hPa	: 1200

Aneroid pressure		
hPa	:	1200
Rated speed rpm	:	900
Del. quantity		
cm3/1000 strokes	:	182.0
Tolerance		
cm3/1000 strokes	:	 3.0
Check tolerance		
cm3/1000s.	:	← 6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Aneroid pressure hPa	:	4	_
Rated speed rpm	:	- 1	150
Del. quantity cm3/1000 strokes	:		95.5
Tolerance cm3/1000 strokes	:	+-	1.0
Check tolerance cm3/1000s.	:	+-	4.0

STARTING FUEL DELIVERY

: 100 Rated speed rpm rack travel mm : 12.50 Tolerance ma : **←** 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : \leftarrow 20.0

Check tolerance : → 25.0

cm3/1000s.

LOW IDLE

Rated speed rpm 420

Rack travel in mm : 5.90 : + 0.20Tolerance man Del. quantity cm3/1000 strokes : 16.5 Tolerance cm3/1000 strokes : +-3.0 Check tolerance

cm3/1000s. 5.0 Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

8.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 402 746 617

Injection pump

Pump designation : PES6P120A720RS7423 EP type number : 0 412 726 963

6overnor

Governer design. : RQV325...975PA909

: -12K

Governer no. : 0 421 815 531

Cust. part No. : 3136C5229-P10

Customer spec. information Customer : MACK Motor : EN7300A Power KW : 223.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 : +- 0.50

Tolerance : \leftarrow 0.50

Check

tolerance 'NW : + 0.75

Start of delivery blocking

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 975

Rack travel in mm: 12.55
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 202.0

	0
Tolongo	Rated speed rpm : 1430
Tolerance + 1.0 +	guide sleeve
unby lood strokes: + 1.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance	roterance mm : - 0.50
cm3/1000s. : + 4.0	
I	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	TOLL LOAD DELIVERY AT TOLL LOAD STOP
opi ced	Rated speed rpm : 975
Tolerance	Aneroid pressure
cm3/1000 strokes : 5.0	hPa : 1200
	Del. quantity
Check tolerance	cm3/1000 strokes : 202.0
cm3/1000s. : 9.0	Tolerance
+	cm3/1000 strokes : +- 1.0
+	Check tolerance
+	cm3/1000s. : +- 4.8
Rated speed rpm : 325	Spreed
†	Tolerance
Rack travel in mm: 5.30	cm3/1000 strokes : 5.0
Tolerance mm : + 0.10	Check tolerance
Del. quantity + cm3/1000 strokes : 44.0 +	cm3/1000s. : 9.0
Tolerance +	
cm3/1000 strokes : + 3.0 +	
Check tolerance	CONTROL LEVER
cm3/1000s. : +- 5.0	CONTROL LEVEN
Spreed	control lever
Tolerance	position degree : 106.0
cm3/1000 strokes : 8.0	tolerance degree : + 4.0
Check tolerance	
cm3/1000s. : 12.0	RATED SPEED
+	rack travel mm : 11.60
+	Rated speed rpm : 1020
(B) SETTING OF INJECTION PUMP +	Tolerance 1/min : + 5
WITH GOVERNOR +	Check
+	speed 1/min : + 10
GUIDE SLEEVE TRAVEL +	rack travel mm : 4.00
+	Rated speed rpm : 1175
Rated speed rpm : 1030	Tolerance 1/min : + 15
guide steeve	Check
travel mm : 8.84 Tolerance mm : + 0.15	speed 1/min : + 20
Toterance man : += 0.13	rack travel mm : 0.50
Rated speed rpm : 325	Tolerance mm : + 0.50
guide sleeve	Rated speed rpm : 1250
travel mm : 1.27	nated speed ipin i lese
Tolerance mm : + 0.20	
+	
Rated speed rpm : 524	
guide sleeve +	LOW IDLE
travel mm : 3.30 +	
Tolerance non : + 0.25	
+	control lever
Rated speed rpm : 390 +	position degree : 61.5
guide sleeve	tolerance degree : + 4.0
travel nam : 2.30	0.442
Tolerance m_0 : $\leftarrow 0.25$	Setting point w/out bumper spring
+	

Rated speed rpm	• 275	ź.		
varten sheen uhu	: 213	Ī	Check	
CRT mm min.	: > 6.50	ł	speed 1/min Check	: > 80
Testing:		$\frac{1}{2}$	speed 1/min	: < 285
Rated speed rpm	: 325	Ţ		
rack travel mm	: 5.30	+	FUEL DELIVERY CHA	RACTERISTICS
Tolerance mm	: + 0.10	+	_	
Rated speed rpm	: 400	I	Aneroid pressure	
•		+	hPa	: 1200
		 +	Rated speed rpm	: 600
TORQUE CONTROL	075	+	Del. quantity	
Rated speed rpm		†	cm3/1000 strokes	: 221.5
rack travel mm		. †	Tolerance	7.0
Tolerance mm	: + 0.05	†	cm3/1000 strokes	: +- 3.0
But all and a limited	. (00	†	Check tolerance	
Rated speed rpm		†	cm3/1000s.	: ← 6.0
rack travel am	: 12.00	†	Spreed	
Tolerance mm	: ← 0.10	†	Tolerance	
	500	†	cm3/1000 strokes	: 8.0
Rated speed rpm		†	Check tolerance	4.5.
rack travel mm		†	cm3/1000s.	: 12.0
Tolerance mm	: +- 0.20	†		
	_	†	anal Annual an	11 50
ANICONTO /AL TITUDE		†	rack travel mm	
ANEROID/ALTITUDE		†	Tolerance mm	: +- 0.20
COMPENSATOR TEST		†		
		Ţ	Aneroid pressure	
CETTIAL		Ţ	hPa	•
SETTING		T		
Dated about man	: 975	Ť	Rated speed rpm	: 400
Rated speed rpm Pressure hPa		†	Del. quantity cm3/1000 strokes	. 1/8.0
rack travel mm		T		: 148.0
		†	Tolerance	
Tolerance mm	: +- 0.05	Ť	cm3/1000 strokes Check tolerance	: +- 2.0
Rated speed rpm	: 975	I	cm3/1000s.	: +- 4.0
_		I	CIID7 10000.	. , 4.0
rack traval mm	: 8.10	\mathbf{I}		
Pressure hPa rack travel mm Tolerance mm	: + 0.20	1		
. J CC I GI IV C IMB	· 0.20	Ţ	STARTING FUEL DEL	IVERY
MEASUREMENT		+		
		+	Rated speed rpm	
Rated speed rpm	: 975	+	rack travel mm	
		+	Tolerance mm	: ← 1.00
Pressure hPa	: 460	+	Del. quantity	
rack travel mm	: 11.15	+	cm3/1000 strokes	: 205.0
Tolerance mm	: + 0.20	+	Tolerance	
		+	cm3/1000 strokes	:
Pressure hPa	: 235	+	Check tolerance	_
rack travel mm		+	cm3/1000s.	: +- 30.0
Tolerance mm	: + 0.05	+		
		†		
Start interlock		<u> </u>		·
ordir mrei rock		I	LOW IDLE	
Rated speed rpm	: > 100	I	CAM TAPE	
Rated speed rpm		I	Rated speed rpm	: 325
Haden Specta (pill		f."	Table opens (pill	

Rack travel in mm	:	5.30
Tolerance mm	: ←	0.10
Del. quantity		
cm3/1000 strokes	:	44.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.02.98 : 16.02.98 : ISO 4113

Combination No. : 0 402 746 618

Injection pump

Pump designation : PES6P120A720RS7423 EP type number : 0 412 726 963

Governor

Governer design. : RQV325...875PA909

: -13K

Governer no. : 0 421 815 532

Cust. part No. : 313GC5229-P6

Customer spec. information Customer : MACK : EMN7300 Motor Power KW

: 223.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 2 413 359 008

Inlet press. bar :

2.8

Tolerance bar : + 0.1

Test nozzle holde : 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter :

x inside diameter :

2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80Tolerance mm : $\leftarrow 0.05$

Check

tolerance mma : + G.10

Rack travel in mm : 10.50

Tolerance mm : + 1.00

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

: ← G.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery blocking

: + 0.50 Tolerance

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 875

Rack travel in mm : 12.85 Tolerance mn: $\leftarrow 0.05$

Del. quantity cm3/1000 strokes : 212.5	+ Tolerance mm : +- 0.25
Tolerance	+ Rated speed rpm : 1350 + guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	Toterarice iam . + 0.50
	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+ Rated speed rpm : 875
Tolerance cm3/1000 strokes : 5.0	Aneroid pressure hPa : 1200
Check tolerance cm3/1000s. : 9.0	+ Del. quantity + cm3/1000 strokes : 212.5 + Tolerance
	cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm : 325	- cm3/1000s. : + 4.0 - Spreed
· · · · · · · · · · · · · · · · · · ·	Tolerance
Rack travel in mm : 5.00 Tolerance mm : + 0.10	cm3/1000 strokes : 5.0 Check tolerance
Del. quantity	cm3/10003. : 9.0
cm3/1000 strokes : 44.0 Tolerance	<u>†</u>
cm3/1000 strokes : +- 3.0	
Check tolerance : +- 5.0	CONTROL LEVER
Spreed	control lever
Tolerance	position degree : 109.5
cm3/1000 strokes : 8.0 Check tolerance	tolerance degree : +- 4.0
cm3/1000s. : 12.0	RATED SPEED
	+ rack trave.mm : 11.35 + Rated speed rpm : 920
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : + 5
WITH GOVERNOR	+ Check + speed 1/min : +- 10
	T Speed Militit . T 10
GUIDE SLEEVE TRAVEL	rack travel mm : 4.00
Rated speed rpm : 931 guide sleeve	Rated speed rpm : 1075 Tolerance 1/min : + 15 Check
travel mm : 8.41	speed 1/min : + 20
Tolerance mm : ← 0.15	+ rack travel mm : 0.50
Rated speed rpm : 325 guide sleeve	Tolerance mm : + 0.50 Rated speed rpm : 1200
travel mm : 1.79	+
Tolerance mm : + 0.20	†
Rated speed rpm : 754	LOUINE
guide sleeve travel mm : 6.98	+ LOW IDLE +
Tolerance mm : + 0.25	+
Rated speed rpm : 520	control lever position degree : 62.5
guide sleeve travel mm : 4.05	tolerance degree : +- 4.0
	·

Setting point w/out bumper spring
Rated speed rpm : 225
CRT mm min. :> 6.50
Testing:
Rated speed rpm : 325 rack travel mms : 5.00 Tolerance mm : + 0.10
Rated speed rpm : 425
TORQUE CONTROL Rated speed rpm : 875 rack travel mm : 12.85 Tolerance mm : + 0.05
Rated speed rpm : 510 rack travel mm : 14.05 Tolerance mm : + 0.10
Rated speed rpm : 400 rack travel mm : 13.50 Tolerance mm : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST
SETTING
Rated speed rpm : 510 Pressure hPa : 1200
Rated speed rpm : 510 Pressure hPa : rack travel mma : 8.40 Tolerance mma : +- 0.20
MEASUREMENT
Rated speed rpm : 510
Pressure hPa : 785 rack travel mm : 13.30 Tolerance mm : + 0.20
Pressure hPa : 370 rack travel mma : 9.90 Tolerance mma : + 0.05
Start interlock
Rated speed rpm :> 100 Rated speed rpm :< 275

Check		
speed 1/min	: > 80	
Check speed 1/min	: < 285	
speed man	. \ 203	
FUEL DELIVERY CHA	ACTEDICTICS	
TOLL DELIVERY CHA	INACTERISTICS	
Aneroid pressure		
hPa	: 1200	
Rated speed rpm	: 510	
Del. quantity	22/ 2	
cm3/1000 strokes Tolerance	: 296.0	
cm3/1000 strokes	: ← 3.0	
Check tolerance	5.0	
cm3/1000s.	: ← 6.0	
Spreed		
Tolerance	0.0	
cm3/1000 strokes Check tolerance	: 8.0	
cm3/1000s.	: 12.0	
3.107 100001		
rack travel mm	: 13.50	
Tolerance ma	: + 0.20	
Aneroid pressure		
hPa	-	
Rated speed rpm	: 400	
Del. quantity cm3/1000 strokes	: 159.0	
Tolerance	. 157.0	
cm3/1000 strokes	: +- 2.0	
Check tolerance		
cm3/1000s.	: ← 4.0	
STARTING FUEL DEL	TVFRY	
Rated speed rpm	: 100 : 11.30	
rack travel mm Tolerance mm	: 11.30 : ← 1.00	
Del. quantity	. 1- 1.00	
cm3/1000 strokes	: 230.0	
Tolerance		
cm3/1000 strokes	: ← 20.0	
Check tolerance cm3/1000s.	• ± 25 0	
CIRO/ TUUUS.	: + 25.0	
	·	
LOW IDLE		

Rated speed rpm

325

Rack travel in mm	:		5.00
Tolerance am	:	+-	0.10
Del. quantity			
cm3/1000 strokes	:		44.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+-	5.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 16.02.98

: 16.02.98

Combination No. : 0 402 746 619

Injection pump

Pump designation : PES6P120A720RS7423

EP type number : 0 412 726 963

Governor

Governer design. : RQV325...900PA909

: -14K

Governer no. : 0 421 815 533

Cust. part No. : 3136C5229-P4

Customer-spec. information Customer : MACK : EN7400 Motor Power KW : 298.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8

Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter :

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

: +- 0.50 Tolerance

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 16.00 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 277.5	- Tolerance mm : + 0.25 - Rated speed rpm : 1350
Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	-
Spreed	- FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	- Rated speed rpm : 900 - Aneroid pressure
cm3/1000 strokes : 5.0	- hPa : 1500 - Del. quantity
Check tolerance cm3/1000S. : 9.0	- cm3/1000 strokes : 277.5 - Tolerance
	- cm3/1000 strokes : +- 1.0 - Check tolerance
	- cm3/1000s. : + 4.0
Rated speed rpm : 325	- Spreed - Tolerance
Rack travel in mm: 5.10	- cm3/1000 strokes : 5.0
Tolerance mm : + 0.10 + Del. quantity	- Check tolerance - cm3/1000s. : 9.0
cm3/1000 strokes : 44.0	-
cm3/1000 strokes : + 3.0	
Check tolerance cm3/1000s. : +- 5.0	- CONTROL LEVER
Spreed	- - control lever
Tolerance cm3/1000 strokes : 8.0	- position degree : 115.0 - tolerance degree : +- 4.0
Check tolerance	- toterance degree : + 4.0
cm3/1000s. : 12.0	- RATED SPEED - rack travel mm : 15.00
(7)	- Rated speed rpm : 945
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- Tolerance 1/min : +- 5 - Check
	speed 1/min : +- 10
GUIDE SLEEVE TRAVEL	- rack travel mm : 4.00
Rated speed rpm : 957	- Rated speed rpm : 1140 - Tolerance 1/min : +- 15
guide sleeve	- Check
travel mm : 8.66 + Tolerance mm : +- 0.15	- speed 1/min : +- 20
	rack travel mm : 0.50
Rated speed rpm : 325 - guide sleeve -	- Tolerance mm : + 0.50 - Rated speed rpm : 1200
travel mm : 1.79	-
Tolerance mm : + 0.20	- -
Rated speed rpm : 763	
guide sleeve + travel mm : 7.04 +	- LOW IDLE -
Tolerance mm : + 0.25	-
Rated speed rpm : 520	- control lever - position degree : 62.0
guide sleeve	tolerance degree : + 4.0
travel mm : 4.05 +	-

Setting point w/o	out bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 7.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 5.10
Rated speed rpm	: 425
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 900 : 16.00 : + 0.05
Rated speed rpm rack travel mma Tolerance mma	
Rated speed rpm rack travel mm Tolerance mm	: 500 : 13.90 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 900 : 1500
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: -
MEASUREMENT	
Rated speed rpm	: 900
Pressure hPa rack travel mm Tolerance mm	: 980 : 14.40 : + 0.20
Pressure hPa rack travel mma Tolerance mma	: 450 : 10.35 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 275

Check	
speed 1/min	: > 80
Check	295
speed 1/min	: < 285
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: 1500
Rated speed rpm	: 1500 : 625
Del. quantity	
cm3/1000 strokes	: 305.5
Tolerance	
cm3/1000 strokes Check tolerance	: ← 3.0
cm3/1000s.	: +- 6.0
Spreed	0,0
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	
CMS/ (UUUS.	: 12.0
	
rack travel mm	: 13.90
Tolerance mm	: +- 0.20
Aneroid pressure hPa	•
Rated speed rpm	400
Del. quantity	• 400
cm3/1000 strokes	: 159.0
Tolerance	. 22
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1800s.	: + 4.0
	4.0
STARTING FUEL DEL	LIVERY
Rated speed rpm	: 100
rack travel man	: 11.20
Tolerance mm	: ← 1.00
Del. quantity cm3/1000 strokes	: 215.0
Tolerance	: 215.0
cm3/1000 strokes	: + 20.0
Check tolerance	
cm3/1000s.	: +- 25.0
LOW IDLE	
Rated speed rpm	: 325
• • • • •	

Rack travel in mm	•	+-	5.10 0.10
Tolerance mm Del. quantity	:	+-	0.10
cm3/1000 strokes	:		44.0
Tolerance			
cm3/1000 strokes	:	+	3.0
Check tolerance			
cm3/1000s.	:	+-	5.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 402 746 620

Injection pump

Pump designation : PES6P120A720RS7423

EP type number : 0 412 726 963

Governor

Governer design. : RQV325...900PA909

: -15K

Governer no. : 0 421 815 534

Cust. part No. : 3136C5229-P2

Customer—spec. information Customer : MACK Motor : EN7350

Power KW : 261.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 2 413 319 008

Inlet press. bar : 2.8 Tolerance bar : ← 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.00

rocci canoc mie.

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 14.15
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 234.5

			+ Rated speed rpm	: 1100
Tolerance		•	† guide sleeve	
cm3/1000 strokes	: +- 1.0	•	† travel mm	: 10.5
			† Tolerance mm	: + 0.2
Check tolerance		•	+	
cm3/1000s.	: +- 4.0	•	+ Rated speed rpm	: 1350
			🕂 guide sleeve	
Spreed			+ travel mm	: 13.5
.,			Tolerance mm	: + 0.5
Tolerance			1 Total direct imm	
cm3/1000 strokes	: 5.0			
CIRCY TOOO SET ORES	. 5.0		FULL LOAD DELIVER	V AT ELLI
Check tolerance			T FOLL COMP DELIVER	AI FULL
cm3/1000s.	: 9.0	•	T Dated and all	
CHS7 TOUUS.	: 9.0	•	+ Rated speed rpm	: 900
			+ Aneroid pressure	
			† hPa	: 1200
		1	+ Del. quantity	
Reted speed ram	: 325	Ţ .	cm3/1000 strokes	: 234.
		•	+ Tolerance	
Rack travel in mm		, , , , , , , , , , , , , , , , , , ,	+ cm3/1000 strokes	: ← 1.
Tolerance mm	: +- 0.10		+ Check tolerance	
Del. quantity		\$.	+ cm3/1000s.	: +- 4.
cm3/1000 strokes	: 44.0		Spreed	•
Tolerance			+ Tolerance	
cm3/1000 strokes	: ← 3.0		+ cm3/1000 strokes	: 5.
Check tolerance			+ Check tolerance	
cm3/1000s.	: ← 5.0		+ cm3/1000s.	: 9.
Spreed		10 €	T (IID) 10003.	• 7.0
•			T	
Tolerance		•	Ť	
cm3/1000 strokes	: 8.0	•	1	
Check tolerance	40.0	•	+ CONTROL LEVER	
cm3/1000s.	: 12.0	•	†	
		•	+ control lever	
		•	+ position degree	
(B) SETTING OF IN	NECTION PUMP	•	+ tolerance degree	: + 4.1
WITH GOVERNOR		•	+	
		•	+ RATED SPEED	
			+ rack travel mm	: 13.1
GUIDE SLEEVE TRAV	EL		Rated speed rpm	
•			+ Tolerance 1/min	
Rated speed rpm	: 900		Check	-
guide sleeve			speed 1/min	: +- 1
travel mm	: 8.40		1	• • •
Tolerance mm	: +- 0.10		rack travel mm	: 4.0
IOCCI ON NO HEN	0.10	•	+ Rated speed rpm	: 1115
Rated speed rpm	. 325	•	+ Rated speed rpm + Tolerance 1/min	
	, 30	•		: +- 1:
guide sleeve	. 470	•	+ Check	
travel mm	: 1.30	•	speed 1/min	: +- 2
Tolerance mm	: ← 0.70	-	†	
		•	† rack travel mm	
Rated speed rpm	: 650	•	† Tolerance mm	
guide sleeve		•	+ Rated speed rpm	: 1200
T .	: 5.70	•	+	
travel mm Tolerance mm	: +- 0.20		+	
	- · - · -	•	+	
Rated speed rpm	: 450			
guide sleeve			LOW IDLE	
travel mm	: 3.00		1	
Tolerance mm			1	
INTELIGITE INT	. +- 0.20	•	₹	

: 10.50 : + 0.20 : 1350 : 13.50 : + 0.50 Y AT FULL LOAD STOP : 900 : 1200 : 234.5 : **←** 1.0 : + 4.0 : 5.0 : 9.0 : 114.0 : + 4.0 : 13.15 : 945 : + 5 : +- 10 : 4.00 : 1115 : + 15 : +- 20 : 0.50 : ← 0.50 : 1200

control lever position degree : 63.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm 225 CRT mm min. :> 7.00 Testing: Rated speed rpm 325 : rack travel mm 5.00 : +- 0.10 Tolerance mm Rated speed rom : 425 TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 14.15 : + 0.05Tolerance mm 625 Rated speed rpm : rack travel mm : 14.00 : + 0.10Tolerance mm Rated speed rpm : 500 rack travel mm : 12.70 : **←** 0.20 Tolerance m ANEROID/ALTITUDE COMPENSATOR TEST SETTING 900 Rated speed rpm :

Rated speed rpm : 900
Pressure hPa : 1200
rack travel mm : 14.15
Tolerance mm : + 0.05

Rated speed rpm : 900
Pressure hPa : rack travel mm : 8.40
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 900

Pressure hPa : 820
rack travel mm : 13.20
Tolerance mm : + 0.20

Pressure hPa : 380 rack travel mm : 9.85

Tolerance mm : + 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 275

Check

speed 1/min : > 80 Check

speed 1/min : < 285

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure : 1200 Rated speed rpm 3 625 Del. quantity cm3/1000 strokes : 267.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 12.0

rack travel mm : 12.70
Tolerance mm : + 0.20

Aneroid pressure

hPa : -Rated speed rpm : 400 Del. quantity

cm3/1000 strokes : 155.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.70
Tolerance mm : + 1.00
Del. quantity
cm3/1000 strokes : 200.0
Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : \leftarrow 25.0

LOW IDLE

Rated speed rpa	:		325
Rack travel in mm	:		5.00
Tolerance am	: .	+	0.10
Del. quantity			
cm3/1000 strokes	:		44.0
Tolerance			
cm3/1000 strokes	: •	+-	3.0
Check tolerance			
cm3/1000s.	: •	+-	5.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.02.98 Edition : ISO 4113 Test oil

Combination No. : 0 402 746 621

Injection pump

Pump designation : PES6P120A720RS7424 EP type number : 0 412 726 964

Governor

Governer design. : RQV325...875PA944

: -24K

: 0 421 815 535 Governer no.

Cust. part No. : 3136C5228-P14

Customer-spec. information : MACK Customer : EM7-300 Motor : 224.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter :

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

17.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm: 12.00 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

Tolerance : + - 0.50

Check

tolerance $^{\circ}NW$: + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 875

Rack travel in mm: 14.10

Del. quantity cm3/1000 strokes : 312.0	+ Tolerance mm : + 0.25
Tolerance	Rated speed rpm : 1370 guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 13.50
Check tolerance cm3/1000s. : + 4.0	Tolerance mm : + 0.50
	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	† 2.4.4 m. J
Tolerance	+ Rated speed rpm : 875 + Aneroid pressure
cm3/1000 strokes : 5.0	hPa : 1200
	+ Del. quantity
Check tolerance	cm3/1000 strokes : 312.0
cm3/1000s. : 9.0	Tolerance
	+ cm3/1000 strokes : + 1.0 - Check tolerance
	- cm3/1000s. : +- 4.0
Rated speed rpm : 600	Spreed
	+ Tolerance
Rack travel in mm : 4.20 Tolerance mm : + 0.10	cm3/1000 strokes : 5.0
Del. quantity	+ Check tolerance + cm3/1000s. : 9.0
cm3/1000 strokes : 32.0	1 (1107 1 5 6 6 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Tolerance	+
cm3/1000 strokes : + 3.0	
Check tolerance : +- 5.0	+ CONTROL LEVER
Spreed	- control lever
Tolerance	position degree : 103.0
cm3/1000 strokes : 8.0	tolerance degree : + 4.0
Check tolerance	TATES OFFI
cm3/1600s. : 12.0	+ RATED SPEED + rack travel mm : 13.00
	Rated speed rpm : 930
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : + 5
WITH GOVERNOR	+ Check
	+ speed 1/min : + 10
GUIDE SLEEVE TRAVEL	rack travel mana : 4.00
	+ Rated speed rpm : 1115
Rated speed rpm : 939	+ Tolerance 1/min : + 15
guide sleeve travel mm : 7.51	+ Check + speed 1/min : + 20
Tolerance mm : + 0.15	Speed William 20
	rack travel mm : 0.50
Rated speed rpm : 340	Tolerance mm : + 0.50
guide sleeve travel mm : 1.92	Rated speed rpm : 1210
Tolerance mm : + 0.20	I
·	+
Rated speed rpm : 726	
guide sleeve	+ LOW IDLE
travel mm : 5.63 Tolerance mm : + 0.25	I
TO COT MITTED 1 1 TO CO. C.J.	I control lever
Rated speed rpm : 510	position degree : 65.0
guide sleeve	tolerance degree : + 4.0
travel mm : 3.81	+

Setting point w/out bumper spring

Rated	speed	COM	:	275
Larca	Specu	I PAR		にしつ

CRT	20	min.	•	>	6.06
CNI	1969	TOTAL CO.			0.00

Testing:

Rated speed rpm	:		600
rack travel mm	:		4.20
Tolerance ma	:	+	0.10

Rated speed rpm : 425

TORQUE CONTROL		
Rated speed rpm		875
rack travel mm	•	14.10
Tolerance mm	: +	- 0.05

Rated speed rpm	:	510
rack travel mm	:	14.85
Tolerance am	: +	- 0.10

Rated speed rpm	•		625
rack travel mm	:		14.70
Tolerance mm	: -	+-	0.20

Rated speed rpm	•	400
rack travel mm	:	14.25
Tolerance mm	: +	- 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	510
Pressure hPa	:	1200

Rated speed rpm	:	510
Pressure hPa	:	_
rack travel mm	:	9.20
Tolerance mm	: +	-0.20

MEASUREMENT

Rated	speed	rpm	:	510
-------	-------	-----	---	-----

Pressure hPa	:	740
rack travel mm	:	13.20
Tolerance mm	: +	- 0.20

Pressure hPa	:	400
rack travel mm	:	10.60
Tolerance mm	: +	- 0.05

Start interlock

Rated speed rpm Rated speed rpm	: >	100 250	
Check			

Check speed	1/min	:	>	80
Check speed	1/min	:	<	255

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	:		1200
Rated speed rpm	:		510
Del. quantity			
cm3/1000 strokes	:		402.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance	•		
cm3/1000s.	:		12.0

rack travel mm	:	14.70
Tolerance mm	: 4-	0.20

:		-
:		400
:		187.5
:	+-	2.0
:	+-	4.0
	•••••	: +-

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	21.00
Tolerance mm	: +-	0.50
Del. quantity		
cm3/1000 strokes	:	190.0
Tolerance		
cm3/1000 strokes	: +-	20.0
Check tolerance		
cm3/1000s.	: +-	30.0

LOW IDLE

Rated speed rpm	:		600
Rack travel in mm Tolerance mm Del. quantity	-	+-	4.20 0.10
cm3/1000 strokes	:		32.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s. Spreed	:	+-	5.0
Tolerance cm3/1000 strokes Check tolerance	:		8.0
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 402 746 622

Injection pump

Pump designation : PES6P120A720RS7424 EP type number : 0 412 726 964

Governor

Governer des on. : RQV325...900PA944

: -25K

Governer no. : 0 421 815 536

Cust. part No. : 3136C5228-P16

Customer-spec. information Customer : MACK Motor : E7-350 Power KW : 261.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80
Tolerance mm : + 0.05
Check

tolorore

tolerance ma : + 0.10

Rack travel in mm : 12.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 14.15
Tolerance mm : ← 0.05

Del. quantity	+
cm3/1000 strokes : 319.5	
	+ CONTROL LEVER
Tolerance	T CONTINOE ELVEN
cm3/1000 strokes : +- 1.0	- control lever
Cac/1000 Strokes . The 1.0	
Charle hal annua	position degree : 117.0
Check tolerance	tolerance degree : + 6.0
cm3/1000s. : \leftarrow 4.0	†
**************************************	+ RATED SPEED
Spreed	+ rack travel mm : 13.10
	+ Rated speed rpm : 945
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : 5.0	+
	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1115
cm3/1000s. : 9.0	+ Tolerance 1/min : + 15
. 7.0	1 Total diffe 17 mill
	rack travel mm : 0.50
	Tolerance mm : 0.50
Rated speed rom : 600	
Rated speed rpm : 600	+ Rated speed rpm : 1200
Book Annual & 1 20	Ť
Rack travel in mm: 4.20	T
Tolerance mm : + 0.10	†
Del. quantity	
cm3/1000 strokes : 32.0	+ LOW IDLE
Tolerance	+
cm3/1000 strokes : + 3.0	+
Check tolerance	+ control lever
$cm3/1000s$, : \leftarrow 5.0	+ position degree : 64.0
Spreed	tolerance degree : + 6.0
Tolerance	total allow degree
cm3/1000 strokes : 8.0	+ Setting point w/out bumper spring
Check tolerance	T secting point wroat bumper spring
cm3/1000s. : 12.0	T Behad aread are
CH3/10003 12.0	+ Rated speed rpm : 275
	T 007 m nin
(D) DESCRIPTION OF THE PROPERTY IN THE	+ CRT mm min. :> 6.10
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	† Testing:
	+
	+ Rated speed rpm : 600
	+ rack travel mm : 4.20
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance mm : ← 0.10
	+
Rated speed rpm : 900	+ Rated speed rpm : 425
Aneroid pressure	+
hPa : 1200	
Del. quantity	+ TORQUE CONTROL
cm3/1000 strokes : 319.5	Rated speed rpm : 900
Tolerance	+ rack travel mm : 14.15
cm3/1000 strokes : + 1.0	
	+ Tolerance mm : ← 0.05
Check tolerance	T David and a land
cm3/1000s. : $+$ 4.0	+ Rated speed rpm : 625
Spreed	f rack travel mm : 13.60
Tolerance	+ Tolerance mm : + 0.10
cm3/1000 strokes : 5.0	+
Check tolerance	+ Rated speed rpm : 500
cm3/1000s. : 9.0	+ rack travel mm : 12.80
	+ Tolerance mm : + 0.40
	1

ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 900 : 1200
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 900 : - : 8.50 : + 0.20
MEASUREMENT	
Rated speed rpm	: 900
Pressure hPa rack travel mm Tolerance mm	: 810 : 13.20 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 420 : 10.15 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 250
Check speed 1/min Check	: > 80
speed 1/min	: < 255
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 625
Del. quantity cm3/1000 strokes	: 339.5
Tolerance cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s. Spreed	: 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
rack travel mm	: 12.80
D40	

Tolerance mm	: +- 0.40
Aneroid pressure hPa Rated speed rpm	: - : 400
Del. quantity cm3/1000 strokes	: 171.0
Tolerance cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: + 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 100 : 20.50
Tolerance mm	: + 1.00
Del. quantity	
cm3/1000 strokes	: 190.0
Tolerance	- 1 20 0
cm3/1000 strokes Check tolerance	: +- 20.0
cm3/1000s.	: - 30.0
LOW IDLE	
LOW IDLE	: 600
Rated speed rpm Rack travel in mm Tolerance mm	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 4.20 : +- 0.10
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 4.20 : + 0.10 : 32.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 4.20 : + 0.10 : 32.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 4.20 : + 0.10 : 32.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 4.20 : + 0.10 : 32.0 : + 3.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 4.20 : + 0.10 : 32.0 : + 3.0 : + 5.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 4.20 : + 0.10 : 32.0 : + 3.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 4.20 : + 0.10 : 32.0 : + 3.0 : + 5.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 4.20 : + 0.10 : 32.0 : + 3.0 : + 5.0 : 8.0

B18

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) k400/...

Edition : 16,02,98 Test oil : ISO 4113

Combination No. : 0 402 746 623

Injection pump

Pump designation : PES6P120A720RS7424 EP type number : 0 412 726 964

Governor

Governer design. : RQV325...875PA944

: -26K

: 0 421 815 537 Governer no.

Cust. part No. : 313GC5228-P4

Customer-spec. information Customer : MACK Motor : EM7-275 Power KW : 202.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3,30 Tolerance mm : **←** 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 12.00 Tolerance mm : ← 1.00

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300 : + 0.50

Tolerance

Check

tolerance "NW : -- 0.75

Start of delivery blocking

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 875

Rack travel in mm: 13.45 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 293.5

	1
Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 118.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : ← 4.0	RATED SPEED + rack travel mm : 12.40
Spreed	Rated speed rpm : 920 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : 5.0	Check speed 1/min : + 10
Check tolerance cm3/1000s. : 9.0	rack travel mm : 4.00 Rated speed rpm : 1075 Tolerance 1/min : + 15
	+ Check + speed 1/min ; + 20
Rated speed rpm : 340	+ rack travel mm : 0.50
Rack travel in mm : 4.90 Tolerance mm : + 0.10 Del. quantity	Tolerance mm : + 0.50 Rated speed rpm : 1200
cm3/1000 strokes : 40.0 Tolerance	‡
<pre>cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0</pre>	LOW IDLE
Spreed Tolerance	+ control lever
cm3/1000 strokes : 8.0 Check tolerance	position degree : 63.5 tolerance degree : + 4.0
cm3/1000s. : 12.0	Setting point w/out bumper spring
	+ Second point would bumper spring
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 275
	+ CRT mm min. :> 6.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
075	+ Rated speed rpm : 340
Rated speed rpm : 875 Aneroid pressure	+ rack travel mm : 4.90 + Tolerance mm : + 0.10
hPa : 1200	Poted was down a 125
Del. quantity cm3/1000 strokes : 293.5 Tolerance	Rated speed rpm : 425
cm3/1000 strokes : + 1.0 Check tolerance	TORQUE CONTROL Rated speed rpm : 875
cm3/1000s. : +- 4.0 Spreed	rack travel mm : 13.45 Tolerance mm : + 0.05
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 510
Check tolerance cm3/1000s. : 9.0	rack travel mm : 14.20 Tolerance mm : + 0.10
	Rated speed rpm : 600
CONTROL LEVER	rack travel mm : 14.30 Tolerance mm : + 0.10

Rated speed rpm rack travel mam Tolerance mam	: 13.60	Check tolerance cm3/1000s. : 12.0
ANEROID/ALTITUDE COMPENSATOR TEST		rack travel mm : 14.30 Tolerance mm : + 0.10
SETTING		Aneroid pressure
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 14.20	Rated speed rpm : 400 Del. quantity cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : +- 2.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: - : 8.80	Check tolerance cm3/1000s. : +- 4.0
MEASUREMENT	0.20	STARTING FUEL DELIVERY
Rated speed rpm		Rated speed rom : 100 rack travel mm : 21.00 Tolerance mm : + 0.50
Pressure hPa rack travel mm Tolerance mm	: 12.60	+ Del. quantity + cm3/1000 strokes : 180.0 Tolerance + cm3/1000 strokes : + 20.0
Pressure hPa rack travel mm Tolerance mm	: 310 : 10.15 : ← 0.05	Check tolerance cm3/1000s. : + 30.0
Start interlock		LOW IDLE
Rated speed rpm Rated speed rpm		Rated speed rpm : 340
Check speed 1/min Check	: > 80	Rack travel in mm: 4.90 Tolerance mm: + 0.10 Del. quantity
speed 1/min	: < 255	cm3/1000 strokes : 40.0 Tolerance
FUEL DELIVERY CHA	ARACTERISTICS	cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0
Aneroid pressure		Spreed Tolerance
hPa Rated speed rpm Del. quantity		cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
cm3/1000 strokes Tolerance cm3/1000 strokes		‡
Check tolerance cm3/1000s. Spreed	: ← 6.0	End of test specification sheet
Tolerance cm3/1000 strokes	: 8.0	‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.02.98 Edition : 10.02.70 : ISO 4113 Test oil

Combination No. : 0 402 746 624

Injection pump

Pump designation : PES6P120A720RS7424 EP type number : 0 412 726 964

Governor

Governer design. : RQV325...975PA944

: -27K

Governer no. : 0 421 815 538

Cust. part No. : 313GC5228-P8

Customer-spec. information Customer : MACK : E7-300A Motor Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

fest oil inlet

temp. °C Tolerance °C : **←** 2.0

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 12.00 Tolerance mm : \leftarrow 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : ← 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 975

Rack travel in mm: 12.95 Tolerance mm : **←** 0.05

Del. quantity

cm3/1000 strokes : 272.0

	1 5 4 1 475
Tolerance	Rated speed rpm : 1350
cm3/1000 strokes : + 1.0	+ guide sleeve + travel mm : 13.50
CIRDA 1000 SELONES	Tolerance mm : + 0.50
Check tolerance	Total di local di loc
cm3/1000s. : + 4.0	
	FULL LOAD DELIVERY AT FULL LOAD ST
Spreed	+
	Rated speed rpm : 975
Tolerance	+ Aneroid pressure
cm3/1000 strokes : 5.0	+ hPa : 1200
	+ Del. quantity
Check tolerance cm3/1000s. : 9.0	cm3/1000 strokes : 272.0
cm3/1000s. : 9.0	+ Tolerance + cm3/1000 strokes : +- 1.0
	Check tolerance
	cm3/1000s. : + 4.0
Rated speed rpm : 340	Spreed
, , , , , , , , , , , , , , , , , , , ,	+ Tolerance
Rack travel in mm : 4.80	+ cm3/1000 strokes : 5.0
Tolerance $m_1 : \leftarrow 0.10$	† Check tolerance
Del. quantity	+ cm3/1000s. : 9.0
cm3/1000 strokes : 31.5	†
Tolerance	†
cm3/1000 strokes : + 3.0	ANALYSIA A TOUTH
Check tolerance cm3/1000s. : + 5.0	+ CONTROL LEVER
Spreed : - 3.0	t control lever
Tolerance	position degree : 112.0
cm3/1000 strokes : 8.0	tolerance degree : + 4.0
Check tolerance	Tocci and degree 4.0
cm3/1000s. : 12.0	+ RATED SPEED
	rack travel mm : 11.90
	Rated speed rpm : 1020
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 5
WITH GOVERNOR	+ Check
	+ speed 1/min : + 10
GUIDE SLEEVE TRAVEL	most description at 1 Oct
POTINE STEERS LEGARET	rack travel mm: : 4.00 Rated speed rpm : 1180
Rated speed rpm : 1031	Tolerance 1/min : +- 10
guide sleeve	Check
travel mm : 9.10	+ speed 1/min : + 20
Tolerance mm : + 0.15	+
	rack travel mm : 0.50
Rated speed rpm : 340	+ Tolerance mm : ← 0.50
guide steeve	+ Rated speed rpm : 1300
travel mm : 1.75	†
Tolerance mm : + 0.20	†
Rated speed rpm : 882	†
Rated speed rpm : 882 guide sleeve	LOW IDLE
travel ma : 7.75	I LOW IDEE
Tolerance mm : + 0.25	1
	control lever
Rated speed rpm : 590	position degree : 65.0
guide sleeve	+ tolerance degree : + 4.0
travel mm : 4.25	†
Tolerance mm : + 0.25	+ Setting point w/out bumper spring
	4

: 13.50 : + 0.50 LIVERY AT FULL LOAD STOP rpm : 975 sure : 1200 okes : 272.0 okes : + 1.0 nce : +- 4.0 okes : 5.0 nce : 9.0 ree : 112.0 gree : + 4.0 mm : 11.90 rpm : 1020 min : + 5 : +- 10 mn: : 4.00 rpm : 1180 min : + 10 : +- 20 : 0.50 : + 0.50 rpm : 1300 ree : 65.0 gree : + 4.0

Rated speed rpm	: 240	+
		+ Check
CRT mm min.	: > 6.50	+ speed 1.
		+ Check
Testing:		+ speed 1.
Rated speed rpm	: 340	†
		FUEL DE
rack travel mm Tolerance mm	4.00 4.00	T FUEL DEI
TO CELOTICE INTH	0.10	I
Rated speed rpm	: 425	Aneroid
		+ hPa
		- + Rated s
TORQUE CONTROL		+ Del. qu
Rated speed rpm	: 975	+ cm3/100
rack travel mm Tolerance mm	: 12.95	+ Toleran
Tolerance ma	: +- 0.05	+ cn/3/100
		+ Check to
Rated speed rom		+ cm3/1000
rack travel mm	: 12.25	+ Spreed
Tolerance mm	: +- 0.10	+ Toleran
		+ cm3/100
Rated speed rom		+ Check to
rack travel mm	: 11.60	+ cm3/100
Tolerance mm	: + 0.20	†
		- Î rack tr
AMEROID/ALTITUDE		+ Toleran
COMPENSATOR TEST		I rocer and
CONTRACTOR ICS		I
		Aneroid
SETTING		∔ hPa
		+ Rated s
Rated speed rpm	: 975	+ Del. qui
Pressure hPa	: 1200	- cm3/100
rack travel ma	: 12.95	+ Toleran
Tolerance mm	: + 0.05	+ cm3/100
		+ Check to
Rated speed rom	: 975	+ cm3/100
Pressure hPa	: -	†
rack travel mm	: 8.70	†
Tolerance mm	: + 0.20	-
MEASUREMENT		STARTIN
i musikani versilet 4.1		Rated s
Rated speed rpm	: 975	+ rack tr
• • • • •		+ Toleran
Pressure hPa	: 640	+ Del. qui
rack travel mm	: 11.80	- cm3/100
Tolerance mm	: +- 0.20	+ Toleran
		- cm3/100
Pressure hPa	: 325	+ Check to
rack travel mm	: 9.45	- cm3/100
Tolerance mm	: +- 0.05	1
	. J.U.	+
Ctart Satarlash		- †
Start interlock		LOW IDL
Rated speed rpm		+
Rated speed rom	: < 250	+ Rated s

speed 1/min	: > 80
Check speed 1/min	: < 255
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1200
Rated speed rpm Del. quantity	: 600
cm3/1000 strokes	: 287.0
Tolerance cm3/1000 strokes	: + 3.0
Check tolerance	· + J.(J
cm3/1000s. Spreed	: +- 6.0
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
CIBS/ 10003.	: 12.0
rack travel mm	: 11.60
Tolerance mm	: +- 0.20
Aneroid pressure hPa	
Rated speed rpm	400
Del. quantity	
cm3/1000 strokes	: 171.0
Tolerance cm3/1000 strokes	: + 2.0
Check tolerance	. 4 2.0
cm3/1000s.	: +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 21.00
Tolerance mm	: ← 0.50
Del. quantity cm3/1000 strokes	: 180.0
Tolerance cm3/1000 strokes	: + 20.0
Check tolerance	
cm3/1000s.	: ← 30.0
LOW IDLE	
Rated speed rpm	: 340

Rack travel in mm Tolerance mm	:	+-	4.80 0.10
Del. quantity cm3/1000 strokes Tolerance	:		31.5
cm3/1000 strokes Check tolerance	:	+	3.0
cm3/1000s. Spreed	:	+-	5.0
Tolerance cm3/1000 strokes	:		8.0
Check tolerance cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.02.98 Edition Test oil : ISO 4113

Combination No. : 0 402 746 625

Injection pump

Pump designation: PES6P120A720RS7424 EP type number : 0 412 726 964

Governor

Governer design. : RQV325...875PA944

: -28K

: 0 421 875 539 Soverner no.

Cust. part No. : 313GC5228-P2

Customer-spec. information : MACK Customer : EM7-250 Motor Power KW : 187.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.30 Tolerance mm : **←** 0.05

Check

tolerance m_0 : \leftarrow 0.10

Rack travel in mma: 12.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: + 0.75tolerance *NW

Start of delivery blocking

Tolerance : **←** 0.50

Check

tolerance 'NW : ← 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 875

Rack travel in mm: 12.45 Tolerance mm : **←** 0.05

Del. quantity cm3/1000 strokes : 269.5

<u> </u>	- Rated speed rpm : 1260
Tolerance	- guide sleeve
cm3/1000 strokes : +- 1.0	- travel mm : 13.50
	- Tolerance mm : ← 0.50
Check tolerance	-
$cm3/1000s.$: \leftarrow 4.0	
+	- FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	•
→	- Rated speed rpm : 875
Tolerance	- Aneroid pressure
cm3/1000 strokes : 5.0	- hPa : 1200
	- Del. quantity
Check tolerance	- cm3/1000 strokes : 269.5
cm3/1000s. : 9.0	- Tolerance
	- cm3/1000 strokes : +- 1.0
	- Check tolerance
• 1	- cm3/1000s. : +- 4.0
Rated speed rpm : 340	- Spreed
The control of the co	- Tolerance
Rack travel in mm: 4.70	- cm3/1000 strokes : 5.0
Tolerance man : + 0.10	- Check tolerance
Del. quantity	- cm3/1000s. : 9.0
cm3/1000 strokes : 34.0	
Tolerance	
cm3/1000 strokes : + 3.0	
Check tolerance	- CONTROL LEVER
cm3/1000s. : + 5.0	CONTROL LEVER
Spreed - 5.0	- - control lever
Tolerance	position degree : 116.0
cm3/1000 strokes : 8.0	
	tolerance degree : + 4.0
Check tolerance + cm3/1000s. : 12.0	DATEN COCEN
cm3/1000s. : 12.0	- RATED SPEED
Ť	rack travel mm : 11.40
(D) CETTING OF THE COTTON DUMP	Rated speed rpm : 920
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 5
WITH GOVERNOR	
1	rack travel mm : 4.00
CITAL CIPPLE TO ALIE	Rated speed rpm : 1055
GUIDE SLEEVE TRAVEL	Tolerance 1/min : + 15
Detect aread was a 077	neels denoted and a 0.50
Rated speed rpm : 933	rack travel mm : 0.50
guide sleeve	Tolerance mm : + 0.50
travel mm : 9.87 Tolerance mm : +- 0.15	- Rated speed rpm : 1200
Toterance min : +- U.15	•
Dated aread non a 7/0	
Rated speed rpm : 340	•
guide sleeve	LOUTING
travel mm : 2.25	- LOW IDLE
Tolerance mm : + 0.20	
Dated smood sup a 700	eembral lavan
Rated speed rpm : 706	control lever
guide sleeve	position degree : 63.0
travel mm : 8.09	tolerance degree : +- 4.0
Tolerance mma : + 0.25	Cathing mainh/ b
Batad anada /OD	Setting point w/out bumper spring
Rated speed rpm : 480	Dated aread area a 2/0
guide steeve	- Rated speed rpm : 240
travel mm : 4.59 Tolerance mm : + 0.25	- CRT mm min. :> 6.34
Tolerance mm : $+$ 0.25	- CRT mm min. :> 6.34

Testina:

Rated speed rpm : 340 rack travel mm 4.70 : + 0.10Tolerance mm

Rated speed rpm : 425

TORQUE CONTROL 875 Rated speed rpm 12.45 rack travel mm : + 0.05 Tolerance mm

: 510 · 13.20 Rated speed rom rack travel mm Tolerance mm

400 Rated speed rpm : 12.20 rack travel mm : + 0.20 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

510 Rated speed rpm : 1200 Pressure hPa 13.20 rack travel mm : + 0.1G Tolerance am

510 Rated speed rpm Pressure hPa : 8.70 rack travel mm : **←** 0.20 Tolerance am

MEASUREMENT

: 510 Rated speed rpm

570 Pressure hPa 12.20 rack travel mm : +- 0.20 Tolerance mm

285 9.90 11.05 Pressure hPa : rack travel mm : : + 0.05 Tolerance mm

Start interlock

Rated speed rpm : > 100 250 Rated speed rpm

Check

speed 1/min : > 80 Check speed 1/min : < 255

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure 1200 hPa Rated speed rpm : 510 Del. quantity cm3/1000 strokes : 345.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000S. 6.0 Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000S. 12.0

rack travel mm : 12.20 Tolerance mm : **←** 0.20

Aneroid pressure

hPa Rated speed rpm 400 Del. quantity

cm3/1000 strokes : 183.0 Tolerance

cm3/1000 strokes : +-

Check tolerance

cm3/1000S. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 21.00 rack travel mm : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 190.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000S. : +- 30.0

LOW IDLE

Rated speed rpm : 340

Rack travel in mm: 4.70 Tolerance mm : \leftarrow 0.10

Del. quantity		
cm3/1000 strokes	:	34.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 402 746 626

Injection pump

Pump designation : PES6P12OA72ORS7424 EP type number : 0 412 726 964

Governor

Governer design. : RQV325...975PA944

: -29K

Governer no. : 0 421 815 540

Cust. part No. : 3136C5228-P6

Customer—spec. information Customer : MACK Motor : E7-259A Power KW : 180.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °S : + 2.0

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.30
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 12.00 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 975

Rack travel in mm : 12.95
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 270.5

+	Rated speed rpm : 1430
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0 +	travel ma : 13.50
<u> </u>	Tolerance mm : + 0.50
Check tolerance + 4.0 + 4.0	
CHS/ (5003: . += 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	TOLL LOND DELIVERY AT FOLL LOND OF O
+	Rated speed rpm : 975
Tolerance	Aneroid pressure
cm3/1000 strokes : 5.0	hPa : 1200 Del. quantity
Check tolerance	cm3/1000 strokes : 270.5
cm3/1000s. : 9.0	Tolerance
	cm3/1000 strokes : +- 1.0
. +	Check tolerance
Rated speed rpm : 340	cm3/1000s. : +- 4.0 Spreed
Mared speed 1 pm . 540	Tolerance
Rack travel in mm: 4.90	cm3/1000 strokes : 5.0
Tolerance mm : + 0.10	Check tolerance
Del. quantity +	cm3/1000s. : 9.0
cm3/1000 strokes : 40.0	
cm3/1000 strokes : + 3.0 +	
Check tolerance	CONTROL LEVER
cm3/1000s. : + 5.0	
Spreed	control lever
Tolerance +	position degree : 111.0
cm3/1000 strokes : 8.0 + Check tolerance +	tolerance degree : - 4.0
cm3/1000s. : 12.0	RATED SPEED
+	rack travel mm : 11.90
+	Rated speed rpm : 1020
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 5
WITH GOVERNOR +	Check speed 1/min : + 10
	Speed (/mitt) . The To
GUIDE SLEEVE TRAVEL	rack travel mm : 4.00
+	Rated speed rpm : 1190
Rated speed rpm : 1031	Toterance 1/min : → 15
guide sleeve + travel mm : 8.91 +	Check speed 1/min : +- 20
Tolerance mm : + 0.15	Speed 1/18/11 . +- 20
+	rack travel mm : 0.50
Rated speed rpm : 340	Tolerance mm : + 0.50
guide sleeve	Rated speed rpm : 1300
travel mm : 2.25 + Tolerance mm : + 0.20 +	
Total and the man	
Rated speed rpm : 882	
guide sleeve	LOW IDLE
travel mm : 7.70	
Tolerance mm : + 0.25	control lever
Rated speed rpm : 590	position degree : 63.0
guide sleeve	tolerance degree : + 4.0
travel mm : 4.37	-
Tolerance mm : + 0.25	Setting point w/out bumper spring
+	

Rated speed rpm	: 265	+	
		+ Check	
CRT mm min.	: > 6.50	speed 1/min : > 80	
Testing:		+ Check + speed 1/min : < 255	
		Speed Tright	
Rated speed rpm			
rack travel mm	: 4.90	+ FUEL DELIVERY CHARACTERISTICS	
Tolerance mm	: ← 0.10	+	
Rated speed rpm	: 425	Aneroid pressure	
		+ hPa : 1200 	
TOROUG CONTROL		Rated speed rpm : 600	
TORQUE CONTROL	075	+ Del. quantity	
Rated speed rpm	: 975	cm3/1000 strokes : 303.0	
rack travel mm	: 12.95	+ Tolerance	
Tolerance mm	: ← 0.05	+ cm3/1000 strokes : + 3.0	
		+ Check tolerance	
Rated speed rpm	: 600	+ cm3/1090s. : + 6.0	
rack travel mm	: 12.60	+ Spreed	
Tolerance mm	: ← 0.10	+ Tolerance	
		+ cm3/1000 strokes : 8.0	
Rated speed rpm	: 500	- Check tolerance	
rack travel mm	: 11.80	+ cm3/1000s. : 12.0	
Tolerance mm	: +- 0.20		
ANEROID/ALTITUDE		+ Tolerance mm : + 0.20	
COMPENSATOR TEST			
		Aneroid pressure	
SETTING		+ hPa : -	
02112110		Rated speed rpm : 400	
Rated speed rpm	: 975	Del guentity	
Pressure hPa	: 1200	Del. quantity cm3/1000 strokes : 191.0	
rack travel mm		Tolerance	
Tolerance mm	. 12.75	- cm3/1000 strokes : +- 2.0	
locerance min	. + 0.05	+ Check tolerance	
Rated speed rpm	• 075	- cm3/1000s. : +- 4.0	
	. 713	T (1107 10003 +- 4.0	
Pressure hPa rack travel mm	9.05	I	
Tolerance mm	: + 0.20	T	
rocerance into	0.20	CTADTING FUEL NELTUEDY	
MEASUREMENT		STARTING FUEL DELIVERY	
PICASOREPIEIVI		Rated speed rpm : 100	
Rated speed rpm	: 9 75	rack travel mm : 20.00	
varea speed this	. 713	+ Tolerance mm : + 1.00	
Pressure hPa	: 590	· · · · · · · · · · · · · · · · · · ·	
rack travel mm	: 11.60	+ Del. quantity + cm3/1000 strokes : 180.0	
Tolerance mm	: + 0.20	Tolerance	
TO LET GETTE THE	. +- 0.20		
Dagguer - 50-	. 770	cm3/1000 strokes : + 20.0	
Pressure hPa	: 330	Check tolerance	
rack travel mm	: 9.75	+ cm3/1000s. : $+$ 30.0	
Tolerance mm	: ← 0.05	†	
		†	
Charles to a control of		†	
Start interlock		LAU TALE	
0-4-4 - 1	. > 400	+ LOW IDLE	
Rated speed rpm	: > 100	†	
Rated speed rpm	: < 250	+ Rated speed rpm : 340	

Rack travel in mm	:	4.90
Tolerance mm	: +-	0.10
Del. quantity		
cm3/1000 strokes	:	40. 0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 16.02.98 : ISO 4113

Combination No. : 0 402 776 838

Injection pump

Pump designation : PES6P120A720RS7382

EP type number : 0 412 726 943

Sovemor

Governer design. : RSV625...1100P0A547

: -14

Governer no.

: 0 421 833 545

Cust. part No. : RE67358

Customer-spec. information

Customer : DEERE

Motor : 6081 HZCO1

Power KW : 214.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter:

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery mark

*NW after s.o.d. : 9.50

: +- 0.50 Tolerance

Check

tolerance *NW : ← 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

14.00

Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.45 Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
<u> </u>	Rated speed rpm : 1100
Del. quantity	Aneroid pressure
cm3/1000 strokes : 196.0	hPa : 2000
Tolongo	Del. quantity
Tolerance	cm3/1000 strokes : 196.0
cm3/1000 strokes : + 1.0	Tolerance
<u></u>	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : + 4.0	cm3/1000s. : +- 4.0
7.0	· · · · · · · · · · · · · · · · · · ·
Consider the contract of the c	Spreed
Spreed	Tolerance
+	cm3/1000 strokes : 5.0
Tolerance	Check tolerance
cm3/1000 strokes : 5.0	cm3/1000s. : 9.0
T	VIII-2/ 10000 . 7.0
Check tolerance +	
cm3/1000s. : 9.0	
1	CONTROL LEVER
	TOTAL CONTROL OF CONTR
T	eentmal layer
The Annual Control of the Control of	control lever
Rated speed rpm : 625	position degree : 97.0
+	tolerance degree : +- 4.0
Rack travel in mm: 5.10	•
Tolerance mm : +- 0.10	RATED SPEED
•	
Del. quantity	rack travel mm : 10.40
cm3/1000 strokes : 21.5	Rated speed rpm : 1175
Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : + 3.0	
Check tolerance	rack travel mm : 4.00
	Rated speed rpm : 1235
Spreed	
Tolerance +	rack travel mm : 0.85
cm3/1900 strokes : 8.0	Tolerance mm : + 0.55
Check tolerance	Rated speed rpm : 1350
	hateu speed i pili . 1320
cm3/1000s. : 12.0 +	
+	rack travel mm : 4.00
+	Rated speed rpm : 1235
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : + 15
WITH GOVERNOR	Cost will be the terminal of t
MILLI GOACULOU	
†	
+	
	The summer of the Control of the Con
GUIDE SLEEVE POSITION	LOW IDLE
1	.
Ţ.	
T	and the land
control lever	control lever
position degree : -3 +	position degree : 80.0
Rated speed rpm : 800	tolerance degree : + 4.0
1	
Rack travel in mm: 0.50	Catting point want human anning
	Setting point w/out bumper spring
Tolerance mm : + 0.20	
+	Rated speed rpm : 625
governor spring	rack travel mm : 4.60
pre-tension +	Tolerance mm : + 0.10
	FOLCE GREE INTE
click setting x : 3.75	n 1 1 1 4
+	Rated speed rpm : 100

CRT mm min. : > 19.00 Testing: 625 Rated speed rpm rack travel mm 5.10 : + 0.10Tolerance me TORQUE CONTROL 1100 Rated speed rpm : rack travel mm : 11.45 : **←** 0.05 Tolerance mm Rated speed rom 700 rack travel mm : 13.00 : ← 0.10 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rom 500 Pressure hPa 2000 500 Rated speed rom Pressure hPa rack travel mm 9,60 Tolerance man : **+-** 0.20 MEASUREMENT : 500 Rated speed rpm : 1350 Pressure hPa rack travel ma 12.30 : +- 0.20 Tolerance mm Pressure hPa 630 10.50 rack travel mm Tolerance mm : + 0.05FUEL DELIVERY CHARACTERISTICS Aneroid pressure 2000 hPa Rated speed rpm 700 Del. quantity cm3/1000 strokes : 262.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance

: +- 6.0

Aneroid pressure Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 136.5 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 20.50 rack travel mm : + 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : + 25.0 LOW IDLE Rated speed rpm : 625 5.10 Rack travel in mm: : + 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 21.5 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 :

End of test specification sheet

cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 18,02,98 : ISO 4113

Combination No. : F 002 ADZ 015

Injection pump

Pump designation: PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1250A0C892R

Governer no. : F 002 A20 215

Cust. part No. : 3928602

Customer-spec. information

Customer : CDC

Motor : 4BTA ELITE

Power KW : 86.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5

Tolerance bur : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.45 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : **←** 1.50

Firing order : 1-3-4-2

Tolerance : 0-90-180-270

: +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.35

Tolerance mn: + 0.05

Del. quantity +	Tolerance
cm3/1000 strokes : 113.0	cm3/1000 strokes : + 1.0
	Check tolerance
Tolerance	cm3/1000s. : +- 3.0
cm3/1000 strokes : + 1.0 +	Spreed
	Tolerance
Check tolerance	cm3/1000 strokes : 3.5
cm3/1000s. : $+$ 3.0 $+$	Check tolerance
	cm3/1000s. : 6.0
Spreed	
Tolerance	
cm3/1000 strokes : 3.5	CONTROL LEVER
Cho/ todo strokes . 3.3	CONTROL LEVER
Check tolerance	control lever
cm3/1000s. : 6.0	position degree : 111.0
	tolerance degree : +- 4.0
	to contained degrees to a visa
1	RATED SPEED
Rated speed rpm : 475	rack travel mm : 12.30
<u> </u>	Rated speed rpm : 1320
Rack travel in mm: 6.00	Tolerance 1/min : +- 5
Tolerance mm : + 0.10 +	
Del. quantity	rack travel mm : 5.10
cm3/1000 strokes : 21.0 +	Rated speed rpm : 1410
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0 +	
Check tolerance	rack travel mm : 0.85
cm3/1000s. : + 4.5	Tolerance mm : + 0.55
Spreed	Rated speed rpm : 1475
Tolerance + cm3/1000 strokes : 3.5 +	professional man as E 40
cm3/1000 strokes : 3.5 + Check tolerance	rack travel mm : 5.10 Rated speed rpm : 1410
cm3/1000s. : 5.5	Rated speed rpm : 1410 Tolerance 1/min : +- 15
Cilis/1000s 3.3	Toterance Triain : +- 15
I	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
1	LOW IDLE
<u> </u>	
GUIDE SLEEVE POSITION	control lever
+	position degree : 85.0
Rated speed rpm : 800 +	tolerance degree : +- 4.0
+	
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : + 0.20	Grad : 26.0
<u> </u>	tolerance degree : $+-$ 6.0
governor spring +	0-14:
pre-tension +	Setting point w/out bumper spring
click setting x : 4.25	Rated speed rpm : 475
	rack travel mm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10
TOTE FOUND ACTIVELY ME LOCK FOUND STOP	TOTAL THE THE TANK TO THE TOTAL THE
Rated speed rpm : 1250	Rated speed rpm : 100
Aneroid pressure	nated opeca i pik i (OO
hPa : 1000	CRT mm min. :> 19.00
Del. quantity	
cm3/1000 strokes : 113.0	Testing:
•	-

Rated speed rpm	:	475
rack travel mm	:	6.00
Tolerance mm	: +	- 0.10

rack travel mm : 2.00
Rated speed rpm : 560
Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 13.35 Tolerance mm : ← 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 800 Pressure hPm : 1000

Rated speed rpm : 800
Pressure hPa : rack travel mm : 11.30
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 800

Pressure hPa : 650 rack travel mm : 12.80 Tolerance mm : ← 0.20

Pressure hPa : 500 rack travel mm : 12.00 Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 86.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 121.5
Tolerance
cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 475

Rack travel in mm: 6.00
Tolerance mm: + 0.10
Del. quantity
cm3/1000 strokes: 21.0
Tolerance
cm3/1000 strokes: + 2.0

Check tolerance cm3/1000s. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.02.98 Edition : ISO 4113 Test oil

Combination No. : F 002 A0Z 061

Injection pump

Pump designation : PES4A95D32D/3RS2927

EP type number : F 002 A10 017

Governor

Governer design. : RSV475...1100A2C941R

Governer no. : F 002 A20 242

Cust. part No. : 3930143

Customer-spec. information Customer : CDC : 48NA3.9 Motor Power KW : 54.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 : + 2.0 Tolerance *C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : ← 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 9.50 Tolerance : +- 0.50

Check

tolerance *NW : \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 10.55 Tolerance mm : + 0.05

	rack travel mm : 4.00 Rated speed rpm : 1250
Rated speed rpm : 515	Tolerance 1/min : +- 15
Rack travel in mm: 5.40 Tolerance mm : + 0.20	Ī
Del. quantity cm3/1000 strokes : 13.5 Tolerance	LOW IDLE
cm3/1000 strokes : +- 2.0 Check tolerance	control lever position degree : 81.0
cm3/1000s. : + 4.5 Spreed Tolerance	tolerance degree : + 4.0 Control lever difference
cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	Grad : 19.0 tolerance degree : + 6.0
cm3/1000S. : 5.5	Setting point w/out bumper spring
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 515 rack travel mm : 4.90 Tolerance mm : + 0.20
GUIDE SLEEVE POSITION	Rated speed rpm : 100
control lever	CRT mm min. :> 19.00
position degree : - 3	Testing:
Rated speed rpm : 800 Rack travel in mm : 0.50	Rated speed rpm : 515 rack travel mm : 5.40 Tolerance mm : + 0.20
Tolerance man : + 0.20	<u> </u>
governor spring pre-tension click setting x : 3.00	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 10.55 Tolerance mm : + 0.05
CONTROL LEVER	Rated speed rpm : 600 rack travel mm : 10.55 Tolerance mm : + 0.20
control lever position degree : 100.0 tolerance degree : + 4.0	
RATED SPEED rack travel mm : 9.50 Rated speed rpm : 1175	FUEL DELIVERY CHARACTERISTICS
Tolerance 1/min : + 5	Aneroid pressure
rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 5	Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 82.0
rack travel mm : 0.85	Tolerance : + 1.0
Tolerance mm : + 0.55 Rated speed rpm : 1350	Check tolerance cm3/1000s. : + 3.0
	•

STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 15.0 LOW IDLE Rated speed rpm : 515 Rack travel in mm : 5.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 13.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 5.5
Rated speed rpm : 515 Rack travel in mm : 5.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 13.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
Rack travel in mm: 5.40 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 13.5 Tolerance cm3/1000 strokes: + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes: 3.5 Check tolerance
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 13.02.98 : ISO 4113

Combination No. : F 002 A07 063

Injection pump

Pump designation : PES4A95D320/3RS2927

EP type number

: F 002 A10 017

Governor

Governer design. : RSV475...1100A2C943R

Governer no. : F 002 A20 244

Cust. part No. : 3931397

Customer-spec. information

Customer : CDC

Mator Power KW : 43NA3.9 : 45.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance *C

: + 2.0

Overflow valve

: 2 417 413 093

Inlet press. bar : Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : +- 0.50 Check

: +- 0.75 tolerance *NW

Barrel no. 1 :

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 8.20

Tolerance mm : +- 0.05

C15

Del. quantity + cm3/1000 strokes : 75.0 +	Aneroid pressure
Tolerance	Del. quantity
cm3/1000 strokes : +- 1.0	Tolerance
Check tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. : + 3.0	cm3/1000s. : + 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance
<u> </u>	cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	
	CONTROL LEVER
Dated and days a FSF	control lever
Rated speed rpm : 525	position degree : 88.0 tolerance degree : +- 4.0
Rack travel in mm : 4.60	total and addition . The state of the state
Tolerance mm : +- 0.10 +	RATED SPEED
Del. quantity	rack travel mm : 7.20
cm3/1000 strokes : 13.5	Rated speed rpm : 1175 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	Total alice 17 mills . +- 3
Check tolerance	rack travel mm : 4.00
cm3/1000s. : 4- 4.5	Rated speed rpm : 1215
Spreed	Tolerance 1/min : +- 5
Tolerance + cm3/1000 strokes : 3.5 +	mode Americal arm
Check tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000s. : 5.5	Rated speed rpm : 1300
†	
(D) OFTITALS OF THIS CTION DIME	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1215 Tolerance 1/min : +- 15
	Total directivity
GUIDE SLEEVE POSITION	LOW IDLE
Ī	CAN INCE
control lever	
position degree : -3	control lever
Rated speed rpm : 800	position degree : 74.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50	totel alice degree : T 4.0
Tolerance mm : + 0.20	Control lever difference
+	Grad : 14.0
governor spring	tolerance degree : + 6.0
pre-tension + click setting x : 2.75 +	Setting point w/out bumper spring
7	· · · · · ·
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 525 rack travel mm : 4.10
TOLL LOAD VELIVERY AT FULL LOAD STOP	Tolerance mm : 4.10
Rated speed rpm : 1100	
+	Rated speed rpm : 100

CRT mm min. : > 19.00

Testing:

525 Rated speed rpm rack travel mm : 4.60 : + 0.10Tolerance mm

TORQUE CONTROL

1100 Rated speed rom : 8.20 rack travel mm : : + 0.05Tolerance mm

600 Rated speed rpm 9.20 rack travel mm : + 0.10 Toterance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm 600 Del. quantity

cm3/1000 strokes : 69.5

Tolerance

2.0 cm3/1000 strokes : +-

Check tolerance cm3/1000s. 4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 : +- 0.50 Tolerance mm Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

: + 15.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 525

Rack travel in mm: 4.60 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 13.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 13.02.98 : ISO 4113

Combination No. : F 002 AUZ 064

Injection pump

Pump designation : PES4A95D320/3RS2927

EP type number : F 002 A10 017

Governor

Governer design. : RSV475...1000A2C944R

Governer no.

: F 002 A20 245

Cust. part No. : 3933090

Customer-spec. information : CDC Customer : 4ENA3.9 Motor

Power KW

: 40.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : + 2.0 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar $: \leftarrow 0.1$

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 : + 1.5 bar Tolerance bar

Test lines : 1 680 750 014

Outside diameter: 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 6.50 : **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 8.05 Tolerance mm : \leftarrow 0.05

C18

Del. quantity +	Aneroid pressure
cm3/1000 strokes : 70.5	hPa : -
1	Del. quantity
Tolerance	cm3/1000 strokes : 70.5
cm3/1000 strokes : + 1.0	Tolerance
1.0 T.00	cm3/1000 strokes : + 1.0
Charle Aslamana	
Check tolerance	Check tolerance
$cm3/1000s$. : \leftarrow 3.0	cm3/1000s. : + 3.0
t	Spreed
Spreed	Tolerance
+	cm3/1000 strokes : 3.5
Tolerance	Check tolerance
cm3/1000 strokes : 3.5	cm3/1000s. : 6.0
1	
Check tolerance	
cm3/1000s. : 6.0	
. 0.0	CONTROL LEVER
	CONTROL LEVER
†	control laves
Dated and during FDF	control lever
Rated speed rpm : 525	position degree : 87.0
t	tolerance degree : +- 4.0
Rack travel in mm : 4.75	
Tolerance mm : + 0.10	RATED SPEED
Del. quantity	rack travel mm : 7.00
cm3/1000 strokes : 13.5	Rated speed rpm : 1070
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0	
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1090
Spreed	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : 3.5	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1000s. : 5.5	Rated speed rpm : 1175
+	
+	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1090
WITH GOVERNOR	Tolerance 1/min : + 15
1	
CUTOE CLEENE DOCTITON	
GUIDE SLEEVE POSITION	LOUITNIE
†	LOW IDLE
†	
control lever	
position degree : -3	control lever
Rated speed rpm : 800	position degree : 70.0
+	tolerance degree : + 4.0
Rack travel in mm: 0.50	
Tolerance mm : + 0.20	Control Lever difference
	Grad : 17.0
governor spring	tolerance degree : + 6.0
pre-tension	cotto diffe degli ee . T 0.0
	Catting point which himsen and
click setting x : 3.75	Setting point w/out bumper spring
†	
	Rated speed rpm : 525
FULL LOAD DELIVERY AT FULL LOAD STOP +	rack travel mm : 4.25
+	Tolerance mm : + 0.10
Rated speed rpm : 1000	
+	Rated speed rpm : 100
· ·	· · · · · · · · · · · · · · · · · · ·

CRT mm min. : > 19.00

Testing:

525 Rated speed rpm : : 4.75 rack travel am : **←** 0.10 Tolerance mm

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm 8.05 : +- 0.05 Tolerance mm

Rated speed rpm : 600 rack travel mm 9.15 : ← 0.10 Toterance /m

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

600 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 67.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

: +- 4.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50

: **←** 0.50 Tolerance mm

Del. quantity

cm3/1000 strokes : 120.0

To erance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

: +- 15.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 525

Rack travel in mm: 4.75 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 13.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.02.98 : ISO 4113

Combination No. : 0 401 816 706

Injection pump

Pump designation : PE6P120A300RS3075 EP type number : 0 411 826 719

Governor

Governer design. : Governer no.

Cust. part No. : 846681 PO2 v.11.81

Customer-spec. information Customer : PENTA

Motor

: TD120FG

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

40

Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test lines

: 1 680 750 067

Outside diameter :

6.0

x inside diameter: 1.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm

2,65 : +- 0.05 Tolerance am

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11,90 Tolerance mm : **←** 0.10

Del. quantity

cm3/1000 strokes : 244.0

Tolerance cm3/1000 strokes	: ← 1.0			
Check tolerance cm3/1000s.	: ← 4.0			
Spreed				
Tolerance cm3/1000 strokes	: 5.0			
Check tolerance cm3/1000s.	: 9.0			
Rated speed rpm Del. quantity	: 650			
cm3/1000 strokes Tolerance	: 25.0			
cm3/1000 strokes	: ← 2.0			
Check tolerance cm3/1000s.	: ← 5.0			
Spr ee d Tolerance				
cm3/1000 strokes Check tolerance	: 5.0			
cm3/1000s.	: 8.0			
(B) SETTING OF INJECTION PUMP WITH GOVERNOR				
FULL LOAD DELIVER	Y AT FULL LOAD STOP			
Rated speed rpm	: 700			
Aneroid pressure hPa	0 ton			
Del. quantity cm3/1000 strokes	: 244.0			
Tolerance				
cm3/1000 strokes Check tolerance	: - 1.0			
cm3/1000s.	: ← 4.0			

Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	LOW IDLE		
cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 5.0		:	650
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 5.0	cm3/1000 strokes	:	25.0
<pre>cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 5.0</pre>	cm3/1000 strokes	: +-	- 2.0
cm3/1000 strokes : 5.0	cm3/1000s. Spreed	: +-	- 5.0
THE COLUMN TO TH	cm3/1000 strokes	:	5.0
cm3/1000s. : 8.0		:	8.0

End of test specification sheet

Spreed Tolerance

cm3/1000 strokes :

Check tolerance cm3/1000s.

TORQUE CONTROL

Tolerance mm

Rated speed rpm : rack travel mm :

5.0

9.0

: 700 : 11.90 : ← 0.10

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.02.98 Test oil : ISO 4113

Combination No. : 0 401 816 715

Injection pump

Pump designation : PE6P12DA300RS3315 EP type number : 0 411 826 808

Governor

Governer design. : Governer no. :

Cust. part No. : 866027-P04 v.10.93

Customer—spec. information Customer : PENTA Motor : TAD 730 G

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Tolerance l/h: + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.90 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : ← 0.50

Check

tolerance *NW : \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 10.90

Tolerance mm	:	+	0.	10
Del. quantity cm3/1000 strokes	:		243	.0
Tolerance cm3/1000 strokes	:	+-	1	.0
Check tolerance cm3/1000s.	:	+-	4	.0
Spreed	•			
Tolerance cm3/1000 strokes	:		7	.0
Check tolerance cm3/1000s.	:		11	.0
	•			
Rated speed rpm	:		300	
Rack travel in mm Tolerance mm Del. quantity	:	+-	3.9 0.3	
cm3/1000 strokes	•		23	.0
Tolerance cm3/1000 strokes Check tolerance	:	+-	3	.0
cm3/1000s. Spreed	:	+	6	.0
Tolerance cm3/1000 strokes	:		5	.0
Check tolerance cm3/1000s.	:		8	.0
(B) SETTING OF INJ WITH GOVERNOR	E	CTIC	N PI	UMP
FULL LOAD DELIVERY	. ,	AT I	ULL	LOAD STOP
Rated speed rpm Aneroid pressure	:		700	
hPa Del. quantity	:		***	
cm3/1000 strokes Tolerance	:		243.	.0
cm3/1000 strokes Check tolerance	:	+	1.	.0
cm3/1000s. Spreed	:	+-	4	.0
Tolerance cm3/1000 strokes	:		7.	.0
Check tolerance cm3/1000s.	:		11.	-
-	-		- '	

_ •			
Testing:			
Rated speed rpm rack travel mm Tolerance mm	:	+-	300 3.90 0.30
ORQUE CONTROL lated speed rpm lack travel mm lolerance mm	•		700 10.90 0.10
	•		300
Rated speed rpm			
Rated speed rpm Rack travel in mm:			300 3.90 0.30
LOW IDLE Rated speed rpm Rack travel in mm: Tolerance mm Del. quantity	:		3.90 0.30
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	:		3.90
Rated speed rpm Rack travel in mm: Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	:		3.90 0.30 23.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	• • • • • • • • • • • • • • • • • • • •	+ -	3.90 0.30 23.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	• • • • • • • • • • • • • • • • • • • •	+-	3.90 0.30 23.0 3.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance		+-	3.90 0.30 23.0 3.0 6.0
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	• • • • • • • • • • • • • • • • • • • •	+-	3.90 0.30 23.0 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 18.07.97

Test oil

: ISO 4113

Combination No. : 0 401 846 529

Injection pump

Pump designation : PE6P12OA32ORS3186

EP type number : 0 411 826 756

Governor

Governer design. : RQV250...1025PA921

: -4

Governer no.

: 0 421 813 787

Cust. part No. : 422719-P05 V. 06/92

Customer-spec. information

Customer

: VOLVO-TRUCK

Motor

: TD102F (Q)

Power KW

: 220.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 2 417 413 046

Inlet press. bar :

Tolerance bar : + 0.1

Overflow quantity

min. l/h : 120 Tolerance l/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter:

3.0

x length man : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.65

Tolerance ma : ← G.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Barrel no.

1 :

+	Tolerance mm : ← 0.05
BASIC SETTING	Rated speed rpm : 900 guide sleeve
Rated speed rpm : 700	travel ma : 6.50
rated speed (pill : 700	Tolerance mm : + 0.10
Rack travel in mm: 12.45	Rated speed rpm : 430
Tolerance ram : + 0.05	guide sleeve travel mm : 3.65
Del. quantity cm3/1000 strokes : 198.0	Tolerance mm : + 0.15
Tolerance	Rated speed rpm : 700 guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 6.50 Tolerance mm : +- 0.10
Check tolerance cm3/1000s. : + 4.0	
Spreed	GUIDE SLEEVE POSITION
Talauanaa †	andral Asses
Tolerance + cm3/1000 strokes : 5.0 +	control lever
cms/judu strokes: 5.0	position degree : - 1 Rated speed rpm : 1080
Check tolerance	Mared Speed (pill . 1000
cm3/1000s. : 9.0	Rack travel in mm : 16.50
	Tolerance mm : +- 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.10	Rated speed rpm : 700
Tolerance ram : + 0.10 +	Aneroid pressure
Del. quantity	hPa : 1000
cm3/1000 strokes : 19.0	Del. quantity
Tolerance + 2.5 + 2.5	cm3/1000 strokes : 198.0 Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : + 5.0	Check tolerance
Spreed	cm3/1000s. : + 4.0
Tolerance	Spreed
cm3/1000 strokes : 5.0	Tolerance
Check tolerance	cm3/1000 strokes : 5.0
cm3/1000s. : 7.0	Check tolerance cm3/1000S. : 9.0
†	cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
GOIDE OFFICE WAVE	position degree : 62.0
Rated speed rpm : 1080 + guide sleeve	tolerance degree : + 4.0
travel mm : 8.40	control lever
Tolerance mm : + 0.10	position degree : 117.0
+	tolerance degree : +- 4.0
Rated speed rpm : 250	
guide sleeve	RATED SPEED
travel mm : 1.25	rack travel mm : 11.45

Rated speed rpm Tolerance 1/min	: 1060 : +- 5	;

rack travel mm : 4.00
Rated speed rpm : 1135
Tolerance 1/min : + 15

rack travel mma : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 1250

LOW IDLE

control lever

position degree : 65.0 tolerance degree : + 4.0

control lever

position degree : 8.0 tolerance degree : 4.0

Setting point w/out bumper spring

Rated speed rpm : 150

CRT mm min. :> 7.00

Testing:

Rated speed rpm : 250 rack travel mm : 5.10 Tolerance mm : + 0.10

Rated speed rpm : 300

TORQUE CONTROL

Rated speed rpm : 700

rack travel mm : 12.45

Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 12.45
Tolerance mm : + 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 9.75

Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 510 rack travel mm : 2.35 Tolerance mm : + 0.20

Pressure hPa : 100 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 144.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1900s. : + 4.0

LOW IDLE

Rated speed rpm : 250 Rack travel in mm : 5.10 Tolerance m_0 : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000s. : **←** 5.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 13.02.98 Test oil : ISO 4113

Combination No. : 0 401 846 882

Injection pump

Pump designation : PE6P120A320RS3206-1

EP type number : 0 411 826 775

Governor

Governer design. : RQ750PA783-1

Governer no. : 0 421 801 432

Cust. part No. : 863232 PO5 V. 06/96

Customer-spec. information

Customer : VOLVO-PENTA Motor : TWD 1211 G Power KW : 288.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBc diaphragm): 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0

Overflow quantity

min. L/h : 215 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.50 Tolerance mm : ← 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

	1 auto	de sleeve	
4 1. 1 1. 1 			10.00
Rack travel in mm: 13.80 Tolerance mm: +- 0.05	+ Tole		- 0.25
TOTEL CHIEF		ed speed rpm :	870
Del. quantity		de sleeve	
cm3/1000 strokes : 345.0		vel mm :	11.50
T-1	† Tole	erance mm : +	- 0.50
Tolerance cm3/1000 strokes : + 1.0	I		
CHO/1000 SCHOKES . F- 1.0	•	LOAD DELIVERY AT	FULL LOAD STOP
Check tolerance	+		
cm3/1000s. : +- 4.0		ed speed rpm :	700
		roid pressure	
Spreed	+ hPa		_
Tolerance		quantity 1000 strokes :	345.0
cm3/1000 strokes : 5.0		erance	545.0
C/10/ 1000 Strokes . 5.0		1000 strokes : +	- 1.0
Check tolerance		k tolerance	
cm3/1000s. : 9.0			- 4.0
	+ Spre		
		rance	-
700		1000 strokes :	5.0
Rated speed rpm : 300		ck tolerance 1 1000 S. :	9.0
Del. quantity cm3/1000 strokes : 20.0	I cms/	1000s. :	9.0
Tolerance	I		
cm3/1000 strokes : $+$ 3.0			
Check tolerance		ROL LEVER	
$cm3/1000s.$: \leftarrow 6.0	+		
Spreed		rol lever	
Tolerance		tion degree :	88.0
cm3/1000 strokes : 5.0	† tole	rance degree : +	- 4.0
Check tolerance cm3/1000s. : 8.0	T PATE	D SPEED	
cm3/1000s. : 8.0		travelmm :	12.80
		ed speed rpm :	
(B) SETTING OF INJECTION PUMP			- '3
WITH GOVERNOR	+		
		travel mm :	
		d speed rpm :	791
GUIDE SLEEVE TRAVEL	Tole	rance 1/min : +	- 8
Rated speed rpm : 757	I made	travel mm :	0.50
Rated speed rpm : 757 guide sleeve			- 0.50
travel mm : 4.06		d speed rpm :	850
Tolerance mm : + 0.25	+		
	+ ASSE	MBLY GOVERNOR SET	TING
Rated speed rpm : 510	+ .		710
guide sleeve		d speed rpm :	748
travel mm : -8.33	† rack	travel mm :	12.80
Tolerance mm : +- 0.25	T Data	d speed prop .	789
Rated speed rpm : 860		d speed rpm : rance 1/min : +	- 5
Rated speed rpm : 860 guide sleeve	•	travel mm :	4.00
travel mm : 16.96	1		
Tolerance mm : + 0.25	+ rack	travel mm :	
			- 0.50
Rated speed rpm : 814	+ Rate	d speed rpm :	850

Rated speed rpm	: 749
rack travel mm	: 12.80
Rated speed rpm	: 790
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
rack travel mma Tolerance mma Rated speed rpm	:
Rated speed rpm	: 750
rack travel mm	: 12.80
Rated speed rpm	: 791
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel mm	: + 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 751
rack travel mm	: 12.80
Rated speed rpm	: 792
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel man	: 0.50
Tolerance man	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 752
rack travel mm	: 12.80
Rated speed rpm	: 793
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 12.80
Rated speed rpm	: 794
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel mm Tolerance mm Rated speed rpm	:

TORQUE CONTROL		
Rated speed rpm	:	700
rack travel mm	:	13.80
Tolerance mm	: +	- 0.05

LOW IDLE		
Rated speed rpm Del. quantity	:	300
cm3/1000 strokes Tolerance	:	20.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed Tolerance	: +-	6.0
m3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 321

Injection pump

Pump designation : PE6P110A320RS497 EP type number : 0 411 816 165

Governor

Governer design. : RSV200...1200P1A374

: -16

Governer no. : 0 421 833 469

Cust. part No. : 848718 PO9 v. 06/96

Customer—spec. information Customer : PENTA Motor : TD71A Power KW : 167.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 20.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mma : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : ∠26.0 Tolerance bar : ← 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm: 10.40 Tolerance mm: + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

+	
Rack travel in mm : 12.45 Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700
Del. quantity = 129.0	Aneroid pressure hPa : 1000 Del. quantity
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 129.0 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : + 3.0	Check tolerance cm3/1000s. : + 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. 7.5
Check tolerance cm3/1000s. : 7.5	CONTROL LEVER
Rated speed rpm : 300	control lever position degree : 110.0
Rack travel in mm: 5.30	tolerance degree : + 4.0
Tolerance mm : + 0.10 + Del. quantity +	RATED SPEED rack travel mm : 11.45
cm3/1000 strokes : 17.0 + Tolerance + 3.0 +	Rated speed rpm : 1215 Tolerance 1/min : + 5
Check tolerance cm3/1000s. : + 6.0	rack travel mm : 4.00 Rated speed rpm : 1265
Spreed + Tolerance + cm3/1000 strokes : 3.0 +	Tolerance 1/min : + 15 rack travel mm : 0.85
Check tolerance cm3/1000s. : 6.0	Tolerance mm : + 0.55 Rated speed rpm : 1410
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 70.0 tolerance degree : +- 4.0
control lever position degree : -3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Rated speed rpm : 300 rack travel mm : 4.80 Tolerance mm : + 0.10
governor spring + pre-tension +	Testing:
click setting x : 4.30	Rated speed rpm : 300 rack travel mm : 5.30

Tolerance mm	: + 0.10
rack travel mm	
Rated speed rpm	
Tolerance 1/min	: ← 30
TORQUE CONTROL	
Rated speed rpm	: 700 : 12.45
rack travel mm Tolerance mm	: + 0.05
100010100	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500
Pressure hPa	: 1000
rack travel mm Tolerance mm	: 12.45 : + 0.05
Rated speed rpm	
Pressure hPa	: -
rack travel mm	: 10.40
Tolerance mm	: ← 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 340
rack travel mm	: 10.70
Tolerance mm	: + 0.20
Pressure hPa	: 690
rack travel mma	: 12.20 : + 0.05
ioterance mm	: 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	-
Rated speed rpm	: 700
Del. quantity cm3/1000 strokes	: 91.0
Tolerance	: 91.0
cm3/1000 strokes	: + 1.0
Check tolerance	70
cm3/1000s.	: ← 3.0

Rated speed rpm	:		100
rack travel mm	:		20.50
Tolerance mm	:	+-	0.50
Del. quantity			
cm3/1000 strokes	:		210.0
Tolerance			
cm3/1000 strokes	:	+-	15.0
Check tolerance			
cm3/1000s.	:	+-	19.0

LOW IDLE

Rated speed rpm	:	300
Rack travel in mm Tolerance mm Del. quantity	: : +-	5.30 0.10
7.44000	:	17.0
cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000S. Spreed	: +	6.0
	:	3.0
Check tolerance cm3/1000s.	:	6.0

End of test specification sheet

STARTING FUEL DELIVERY

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 340

Injection pump

Pump designation : PE6P110A32ORS499 EP type number : 0 411 816 169

Governor

Governer design. : RSV325...1400P0A374

: -9

Governer no. : 0 421 833 335

Cust. part No. : 864433-P04 v.10.92

Customer—spec. information
Customer : PENTA
Motor : TAMD 61 A
Power KW : 225.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 20.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 9.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

		†
Rack travel in mm Tolerance mm	: 11.10 : ← 0.05	FULL LOAD DELT
Del. quantity cm3/1000 strokes	: 120.0	Aneroid pressi hPa Del. quantity
Tolerance cm3/1000 strokes	: + 1.0	cm3/1000 strol Tolerance cm3/1000 strol
Check tolerance cm3/1000s.	: + 3.0	Check tolerand cm3/1000s.
Spreed		Tolerance cm3/1000 strok
Tolerance cm3/1000 strokes	: 4.0	t Check tolerand cm3/1000s.
Check tolerance cm3/1000s.	: 7.5	CONTROL LEVER
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	 ∴ 4.20 ∴ + 0.10 ∴ 13.0 ∴ + 2.0 ∴ + 4.0 ∴ 3.0 ∴ 6.0 	control lever position degree tolerance degree control lever position degree tolerance degree tolerance degree RATED SPEED rack travel man Rat
GUIDE SLEEVE POSIT	ION	LOW IDLE
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring	: 0.50	control lever position degre tolerance degr control lever position degre tolerance degr
pre-tension click setting x	: 6.00	Setting point

FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm	: 1000
Aneroid pressure	000
hPa	: 900
Del. quantity cm3/1000 strokes	: 120.0
Tolerance	. 120.0
cm3/1000 strokes	: + 1.0
Check tolerance	_
cm3/1000s.	: +
Spreed	
Tolerance cm3/1000 strokes	: 4.0
Check tolerance	. 4.0
cm3/1000s.	: 7.5
CONTROL LEVER	
control lever	
position degree	: 68.0
tolerance degree	: +- 4.0
control lever	
position degree	: 118.0
tolerance degree	
RATED SPEED	
rack travel mm	: 10.10
Rated speed rpm	: 1455
Tolerance 1/min	: - 5
rack travel mm	: 4.00
Rated speed rpm	: 1540
Tolerance 1/min	: ← 15
.4. 4	0.05
rack travel mma Tolerance mm	: 0.85 : + 0.55
Rated speed rpm	: 1630
opeca i più	
LOW IDLE	

control lever
position degree : 83.0
tolerance degree : + 4.0

control lever
position degree : 33.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 325 rack travel mm : 3.70 Tolerance mm : + 0.10 Testing:	Rated speed rpm : 1400 Del. quantity cm3/1000 strokes : 123.0 Tolerance cm3/1000 strokes : + 2.0
Rated speed rpm : 325 rack travel mm : 4.20	Check tolerance cm3/1000s. : +- 5.0
Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 480 Tolerance 1/min : + 30	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 62.0 Tolerance
TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.10 Tolerance mm : + 0.05	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Rated speed rpm : 1400 rack travel mm : 11.10 Tolerance mm : + 0.10	STARTING FUEL DELIVERY
ANEROID/ALTITUDE COMPENSATOR TEST	Rated speed rpm : 100 rack travel mm : 12.30 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 150.0
SETTING	+ Tolerance + cm3/1000 strokes : + 15.0 + Check tolerance
Rated speed rpm : 500 Pressure hPa : 900 rack travel mm : 11.10 Tolerance mm : + 0.05	cm3/1000s. : + 19.0
Rated speed rpm : 500 Pressure hPa : -	LOW IDLE
rack travel mm : 9.00 Tolerance mm : +- 0.10	Rated speed rpm : 325
MEASUREMENT	Rack travel in mm: 4.20 Tolerance mm: + 0.10 Del. quantity
Rated speed rpm : 500 Pressure hPa : 720	- cm3/1000 strokes : 13.0 - Tolerance - cm3/1000 strokes : + 2.0
rack travel mm : 2.10 Tolerance mm : + 0.20	Check tolerance cm3/1000s. : + 4.0
Pressure hPa : 370 rack travel mm : 0.25 Tolerance mm : + 0.05	Tolerance cm3/1000 strokes : 3.0 Check tolerance
FUEL DELIVERY CHARACTERISTICS	- cm3/1000s. : 6.0
Aneroid pressure hPa : 900	End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 754

Injection pump

Pump designation : PE6P110B320RS3152 EP type number : 0 411 816 799

6overnor

Governer design. : RSV200...1100P1A659

Governer no. : 0 421 833 577

Cust. part No. : 3826523-P01 v.08.96

Customer—spec. information Customer : VOLVO—PENTA

Motor : TD1006
Power KW : 203.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damoer

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5

D10

Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance m_0 : \leftarrow 0.10

Rack travel in mm : 10.20 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700	
Rack travel in mm : 12.70 Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700
Del. quantity cm3/1000 strokes : 173.0	Aneroid pressure hPa : 1000 Del. quantity
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 173.0 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : + 4.0	Check tolerance cm3/1000S. : +- 4.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0 Check tolerance
Tolerance cm3/1000 strokes : 4.0	cm3/1000s. : 7.5
Check tolerance : 7.5	CONTROL LEVER
Rated speed rpm : 200	control lever position degree : 62.0 tolerance degree : +- 4.0
Rack travel in mm: 4.30 Tolerance mm: + 0.10 Del. quantity	control lever position degree : 112.0 tolerance degree : +- 4.0
cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance	RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1130
cm3/1000s. : + 4.5 Spreed Tolerance	Tolerance 1/min : + 5 rack travel mm : 4.00
cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : + 0.55 Rated speed rpm : 1300
	rack travel mm : 4.00 Rated speed rpm : 1190 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	
control lever position degree : -3 Rated speed rpm : 800	LOW IDLE
Rack travel in mm: 0.50 Tolerance mm: + 0.20	control lever position degree : 74.0 tolerance degree : +- 4.0
governor spring + pre-tension + click setting x : 5.00 +	control lever position degree : 24.0
- • •	

D11

tolerance degree	: +- 4.0	<u> </u>	Rated speed rpm Del. quantity	: 700
Setting point w/o	out bumper spring	+	cm3/1000 strokes Tolerance	: 126.0
Detect speed spe	. 200	T		15
Rated speed rpm	: 200	†	cm3/1000 strokes	: +- 1.5
rack travel mm	: 3.80	t	Check tolerance	
Tolerance nn	: + 0.10	1	cm3/1000s.	: + 4.0
Testing:		-		
Rated speed rpm	: 200	I	STARTING FUEL DEL	IVERY
rack travel ma		1		202.11
rack travel mm Tolerance mm	: + 0.10	1	Rated speed rpm	: 100
TO CET OFFICE AND	0.10	T	rack travel mm	
	. 2.00	T		
rack travel mm		†	Tolerance mm	: ← 0.50
Rated speed rpm	: 285	. †	Del. quantity	
Tolerance 1/min	: +- 30	+	cm3/1000 strokes	: 180.0
		+	Tolerance	
		 	cm3/1000 strokes	: + 15.0
TORQUE CONTROL		1	Check tolerance	
Rated speed rpm	• 700	1	cm3/1000s.	: + 19.0
		T	CIID/ 10003 .	. 17.0
rack travel mm		T		
Tolerance mms	: + 0.05	Ī		
ANEROID/ALTITUDE		— <u>†</u>	LOW IDLE	
COMPENSATOR TEST		Ι	COM TUCE	
COMPENSATOR TEST		Ŧ	Rated speed rpm	: 200
		†	- 1 - 1 -	/ 70
SETTING		†	Rack travel in mm	: 4.30
		+	Tolerance mm	: ← 0.10
Rated speed rpm	: 500	+	Del. quantity	
Pressure hPa	: 1000	+	cm3/1000 strokes	: 21.0
rack travel mm	: 12.70	+	Tolerance	
Tolerance mm		1	cm3/1000 strokes	: +- 2.0
		1	Check tolerance	
Rated speed rpm	: 500	1	cm3/1000s.	: +- 4.5
Pressure hPa	. 505	I	Spreed	• • ••
rack travel mm	40.20	Ţ	* .	
		T	Tolerance cm3/1000 strokes	. / 5
Tolerance mm	: +- 0.10	†		
		†	Check tolerance	
MEASUREMENT		Ī	cm3/1000s.	: 7.5
Rated speed rpm	: 500	Ì		
December 50-	. 275	T		
Pressure hPa	. 210 . 40 FO	T		
rack travel mm		†	Park and Arrian •	esantsan abiat
Tolerance mm	: + 0.20	†	End of test speci	rication sheet
Danasias bo-	• 670	†		
rressure nra	. 10 15	T		
Pressure hPa rack travel mm	. 12.45	†		
Tolerance mm	: ← 0.05	Ī		
FUEL DELIVERY CHA	RACTERISTICS	 ‡		
		İ		
Aneroid pressure		I		
hPa	• -	I		
ura		T		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 17.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 755

Injection pump

Pump designation: PE6P120B320RS3187 EP type number : 0 411 826 818

Governor

Governer design. : RSV250...1100P1A653

Governer no. : 0 421 833 571

Cust. part No. : 3826534

: -P01 v. 08.96

Customer-spec. information

: VOLVO-PENTA Customer

Motor Power KW : TD121G

: 256.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

: +- 2.0

Tolerance °C

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

D13

Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

: **←** 0.10 tolerance mm

Rack travel in mm:

: +- 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700	
	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 12.50 + Tolerance mm : + 0.05 +	Rated speed rpm : 700
+	Aneroid pressure
Del. quantity + cm3/1000 strokes : 210.5 +	hPa : 1200 Del. quantity
	cm3/1000 strokes : 210.5
Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance	cm3/1000S. : +- 4.0
cm3/1060s. : + 4.0	Spreed Tolerance
Spreed	cm3/1000 strokes : 5.0
- I	Check tolerance
Tolerance cm3/1000 strokes : 5.0	cm3/1000s. : 9.0
Check tolerance	
cm3/1000s. : 9.0	CONTROL LEVER
+	control lever
+	position degree : 58.0
Rated speed rpm : 250	tolerance degree : + 4.0
Rack travel in mm: 4.80	control lever
Tolerance mm : + 0.10	position degree : 108.0
Del. quantity	tolerance degree : + 4.0
cm3/1000 strokes : 27.0	DATEN COUEN
Tolerance + cm3/1000 strokes : ← 2.5 +	RATED SPEED rack travel mm : 11.50
Check tolerance	Rated speed rpm : 1130
cm3/1000s. : +- 5.0	Tolerance 1/min : + 5
Spreed	
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : 5.0	Rated speed rpm : 1185
Check tolerance +	Tolerance 1/min : +- 15
cm3/1000s. : 8.0	0.05
†	rack travel mm : 0.85
(O) SETTING OF THESETION DUMP	Tolerance mm : +- 0.55 Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP +	Rated Speed (pir . 1500
WITH GOVERNOON	rack travel mm : 4.00
1	Rated speed rpm : 1190
	Tolerance 1/min : + 15
GUIDE SLEEVE POSITION	
 	
control lever	
position degree : - 3	LOW IDLE
Rated speed rpm : 800	
Post travel in mr	control lever
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	position degree : 74.0
TOLE OF THE INT.	tolerance degree : +- 4.0
governor spring	to total allocations and
pre-tension +	control lever
click setting x : 4.00	position degree : 24.0
1	

tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm rack travel mm 4.30 : + 0.10 Tolerance mm Testing: 250 Rated speed rpm rack travel mm : 4.80 : + 0.10 Tolerance mm 2.00 rack travel mm Rated speed rpm : 340 Tolerance 1/min : +-TORQUE CONTROL 700 Rated speed rpm : 12.50 rack travel mm : : +- 0.05 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 : 1200 Pressure hPa rack travel mm 12.50 : + 0.05Tolerance mm 500 Rated speed rpm Pressure hPa : 11.20 rack travel mm Tolerance mm : + 0.10**MEASUREMENT** 500 Rated speed rpm : 615 Pressure hPa 11.60 rack travel mm : : + 0.20Tolerance mm : 740 Pressure hPa : 12.25 rack travel mm : + 0.05Tolerance mm FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 178.5
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 11.20
Tolerance mm : + 0.30
Del. quantity
cm3/1000 strokes : 155.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

250 Rated speed rpm : Rack travel in mm: 4.80 Tolerance mm 0.10 Del. quantity cm3/1000 strokes : 27.0 Tolerance cm3/1000 strokes : \leftarrow 2.5 Check tolerance cm3/1000s. : +-5.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.02.98 : ISO 4113

Combination No. : 0 401 876 762

Injection pump

Pump designation : PE6P12OB32ORS32O6 EP type number : 0 411 826 820

Governor

Governer design. : RSV250...900P4A660

Governer no. : 0 421 833 578

Cust. part No. : 3826532 PO1 v.10/96

Customer-spec. information

Customer : VOLVO-PENTA

Motor

: TMD 122 A

Power KW

: 235.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration

damper

(RoBo diaphragm): 4.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar :

1.5

Tolerance bar

: **←** 0.1

Overflow quantity

min. l/h : 100 Tolerance l/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 8.60

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

		† .		
BASIC SETTING		<pre>governor spring pre-tension click setting x</pre>	:	6.00
Rated speed rpm	: 700			
Rack travel in mm	. 9.95	FULL LOAD DELIVER	RY AT	FULL L
Tolerance mm		Rated speed rpm Aneroid pressure	:	700
Del. quantity cm3/1000 strokes	: 213.5	hPa Del. quantity		1000
olerance m3/1000 strokes	· + 1.0	cm3/1000 strokes Tolerance cm3/1000 strokes		
heck tolerance		Check tolerance cm3/1000s.		
m3/1000s.	: +- 4.0	Spreed Tolerance		
ipreed		cm3/1000 strokes Check tolerance		
Tolerance Cm3/1000 strokes	: 5.0	t cm3/1000s.	•	9.0
Check tolerance cm3/1000S.	: 9.0	CONTROL LEVER		
		control lever		
Rated speed rpm	: 250	position degree tolerance degree	: +	59.0 - 4.0
Rack travel in mm Folerance mm	5.10	control lever		100 0
el. quantity m3/1000 strokes		tolerance degree		
olerance m3/1000 strokes		RATED SPEED rack travel mm	:	8.95
heck tolerance	: + 6.0	Rated speed rpm Tolerance 1/min	:	930
preed olerance		rack travel mm	:	4.00
m3/1000 strokes heck tolerance		Rated speed rpm Tolerance 1/min		980 - 15
m3/1000s.	: 8.0	rack travel mm	:	0.85 - 0.55
B) SETTING OF INJ	ECTION PUMP	Tolerance mm Rated speed rpm	:	1130
THI GOVERNOR		rack travel mm Rated speed rpm		4.00 990
GUIDE SLEEVE POSIT	ION	— Tolerance 1/min	: +	- 15
control lever	_			
oosition degree Rated speed rpm	: - 3 : 800	+ LOW IDLE		
Rack travel in mm Tolerance mm	: 0.50 : +- 0.20	control lever position degree	:	80.0

click setting x	: 6.00
FULL LOAD DELIVER	RY AT FULL LOAD STOP
Rated speed rpm	: 700
Aneroid pressure hPa	: 1000
Del. quantity	
cm3/1000 strokes	: 213.5
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance	
cm3/1000s. Spreed	:
Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	; 9.0
CONTROL LEVER	
control lever	
position degree	: 59.0
tolerance degree	: +- 4.0
control lever	444
position degree tolerance degree	: 109.0 : +- 4.0
toter ante degree	• • 4.0
RATED SPEED	: 8.95
rack travel mm Rated speed rpm	: 8.95 : 930
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
Rated speed rpm	: 980
Tolerance 1/min	: ← 15
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 1130
rack travel mm	: 4.00
Rated speed rpm	: 990
Tolerance 1/min	: ← 15
LOW IDLE	
control lever	

tolerance degree : +- 4.0 control lever 30.0 position degree : 4.0 tolerance degree : +-Setting point w/out bumper spring 250 Rated speed rpm rack travel mm 4.60 Tolerance mm : +- 0.10 Testing: 250 Rated speed rpm 5.10 rack travel mm Tolerance mm : + 0.10rack travel mm 2.00 Rated speed rpm : 410 Tolerance 1/min TORQUE CONTROL 700 Rated speed rpm : rack travel mm 9.95 : + 0.05 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700 Pressure hPa 1000 9.95 rack travel mm : **←** 0.05 Tolerance mm Rated speed rpm 700 Pressure hPa rack travel mm 8.60 : **←** 0.10 Tolerance and **MEASUREMENT** 700 Rated speed rpm : 600 Pressure hPa 0.90 rack travel mm : + 0.15 Tolerance mm 460 Pressure hPa 0.25 rack travel mm : + 0.05Tolerance and

Aneroid pressure Rated speed rpm 700 Del. quantity cm3/1000 strokes : 178.0 Tolerance cm3/1000 strokes : + 1.0Check tolerance cm3/1000s. : +-4.0 STARTING FUEL DELIVERY : 100 Rated speed rpm rack travel mm : 8.60 Tolerance mm : + 0.50LOW IDLE Rated speed rpm : 250 5.10 Rack travel in mm : Tolerance mm 0.10 Del. quantity cm3/1000 strokes : 20.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s.: +-6.0 Spreed

End of test specification sheet

5.0

8.0

Tolerance

cm3/1000s.

cm3/1000 strokes :

Check tolerance

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 769

Injection pump

Pump designation : PE6P12OA32ORS32O6-2 EP type number : 0 411 826 784

Governor

Governer design. : RSV250...1300P0A374

: -8

Governer no. : 0 421 833 320

Cust. part No. : 864068 PO5 v. 04/95

Customer spec. information Customer : PENTA Motor : TAMD71 B Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 20.0

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 7.20 Tolerance mm: +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : ← 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

		†	.	
BASIC SETTING		_	governor spring pre-tension	
		+	click setting x	: 6.00
Rated speed rpm	: 1000	‡		
	40.40	+	FULL LOAD DELIVER	RY AT FULL LO
Rack travel in mm Tolerance mm		1	Rated speed rpm	• 1000
TOTEL DITCE 1888			Aneroid pressure	
Del. quantity		+	hPa	: 1200
cm3/1000 strokes	: 216.5	1	Del. quantity cm3/1000 strokes	• 216 5
olerance		— I	Tolerance	. 210.5
cm3/1000 strokes	: + 1.0	+	cm3/1000 strokes	: ← 1.0
Shook dalammaa		†	Check tolerance	
Check tolerance cm3/1000s.	: +- 4.0	I	cm3/1000s. Spreed	: +- 4.0
		+	Tolerance	
Spr ee d		+	cm3/1000 strokes	
folerance		İ	Check tolerance cm3/1000s.	
m3/1000 strokes	: 5.0	+	UND/ 10000:	. ,.0
Check tolerance		‡		
m3/1000s.	: 9.0	‡	CONTROL LEVER	
		+	control lever	
	. 250	†	position degree	
ated speed rpm	: 250	Ī	tolerance degree	: +- 4.0
ack travel in mm		1	control lever	
olerance mm	: ← 0.10	+	position degree	
el. quantity 13/1000 strokes	• 20.0	İ	tolerance degree	: +- 4.0
olerance	. 20.0	1	RATED SPEED	
m3/1000 strokes	: + 2.5	+	rack travel mm	
heck tolerance	: +- 5.0	†	Rated speed rpm	
13/1000s. Dreed	; +- 5.0	I	Tolerance 1/min	: +- 5
olerance		+	rack travel mm	: 4.00
m3/1000 strokes	: 5.0	+	Rated speed rpm	
neck tolerance m3/1000s.	: 7.0	Ī	Tolerance 1/min	: +- 15
45/ 10000 ·	. 1.0	1	rack travel mm	: 0.85
		+	Tolerance mm	: + 0.55
B) SETTING OF INJ TH GOVERNOR	ECTION PUMP	‡	Rated speed rpm	: 1530
		+	rack travel mm	: 4.00
		+	Rated speed rpm	
UIDE SLEEVE POSIT	TON	<u> </u>	Tolerance 1/min	: + 15
OTHE SPECAE LOST!	TOLA	Ţ		
		+		
ontrol lever osition degree	: - 3	İ	LOW IDLE	
	: 800	Ţ		
, ,	. 0.50	+	aambmal lawaa	
ack travel in mm olerance mm	: U.DU · +- 0.20	İ	control lever position degree	· 20 0
していないいと (BM)	0.20	Т	position acgree	. 50.0

pre-tension click setting x	: 6.00
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm	: 1000
Aneroid pressure hPa	: 1200
Del. quantity	: 1200
cm3/1000 strokes	: 216.5
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000s. Spreed	: +- 4.0
Tolerance	
cm3/1000 strokes Check tolerance	: 5.0
cm3/1000s.	: 9.0
control lever	: 64.0
position degree tolerance degree	: 64.0 : +- 4.0
control lever position degree	: 114.0
tolerance degree	: ← 4.0
RATED SPEED	
rack travel mm	: 9.10
Rated speed rpm Tolerance 1/min	: 1340 : +- 5
	. / 00
rack travel mm Rated speed rpm	: 4.00 : 1430
Tolerance 1/min	: +- 15
rack travel mm	: 0.85
Tolerance mm Rated speed rpm	: +- 0.55 : 1530
, ,	
rack travel mm Rated speed rpm	: 4. 00 : 1440
Tolerance 1/min	: + 15
LOW IDLE	
control lever	
position degree	• 80 0

tolerance degree : +- 4.0 control lever 30.0 position degree 4.0 tolerance degree : +-Setting point w/out bumper spring Rated speed rom 250 rack travel mm 4.70 : + 0.10Tolerance and Testing: 250 Rated speed rpm 5.20 rack travel mm : + - 0.10Tolerance mm 2.00 rack travel mm : Rated speed rpm 440 Tolerance 1/min TORQUE CONTROL 1000 Rated speed rpm : rack travel mm 10.10 : **←** 0.05 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm 1200 Pressure hPa 10.10 rack travel mm : + 0.05Tolerance mm Rated speed rpm 500 Pressure hPa 7.20 rack travel mm : + 0.10Tolerance mm **MEASUREMENT** 500 Rated speed rpm 780 Pressure hPa : rack travel mm 2.60 : **←** 0.20 Tolerance mm 350 Pressure hPa 0.25 rack travel mm

Aneroid pressure
hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 136.5
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000S. : + 4.0

LOW IDLE Rated speed rpm : 250 Rack travel in mm : 5.20 : +-0.10 Tolerance mm Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +-2.5 Check tolerance : +-5.0 cm3/1000s.Spreed Tolerance 5.0 cm3/1000 strokes : Check tolerance cm3/1000S.7.0

End of test specification sheet

: + 0.05

Tolerance mm

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 06.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 777

Injection pump

Pump designation : PE6P120B320RS3261 EP type number : 0 411 826 821

Governor

Governer design. : RSV250...1100P0A655

Governer no. : 0 421 833 573

Cust. part No. : 3826513 PO2 v.11.97

Customer—spec. information Customer : PENTA

Motor : TAMD 102 A
Power KW : 294.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration

damper

(RoBo diaphragm): 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 100 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 067

Outside diameter : 6.0

x inside diameter: 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 8.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING	governor spring pre-tension
Rated speed rpm : 700	click setting x : 2.25
Rack travel in mm: 12.15	FULL LOAD DELIVERY AT FULL LOAD STOP
olerance mm : + 0.05	Rated speed rpm : 700 Aneroid pressure
mel. quantity m3/1000 strokes : 260.0	hPa : 1500 Del. quantity cm3/1000 strokes : 260.0
olerance m3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : + 1.0
heck tolerance	Check tolerance cm3/1000s. : + 4.0
m3/1000s. : + 4.0	+ Spreed + Tolerance
Spreed	cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : 5.0	+ cm3/1000s. : 9.0
theck tolerance m3/1000s. : 9.0	CONTROL LEVER
	control lever
ated speed rpm : 250	+ position degree : 47.0 + tolerance degree : +- 4.0
ack travel in mm : 6.50 olerance mm : + 0.10	control lever position degree : 97.0
el. quantity	tolerance degree : + 4.0
m3/1000 strokes : 23.0 olerance	RATED SPEED
m3/1000 strokes : + 3.0 heck tolerance	+ rack travel mm : 11.10 + Rated speed rpm : 1145
m3/1000s. : + 6.0 preed	Tolerance 1/min : + 5
olerance m3/1000 strokes : 5.0	rack travel mm : 4.00 Rated speed rpm : 1210
heck tolerance m3/1900s. : 7.0	Tolerance 1/min : + 15
IID/ 19005	rack travel mm : 0.85 Tolerance mm : + 0.55
B) SETTING OF INJECTION PUMP ITH GOVERNOR	Rated speed rpm : 1350
	rack travel mm : 4.00 Rated speed rpm : 1220
UIDE SLEEVE POSITION	Tolerance 1/min : + 15
ontrol lever	100 7015
osition degree : - 3 ated speed rpm : 800	+ LOW IDLE
ack travel in mm : 0.50 olerance mm : +- 0.20	control lever position degree : 73.0

tolerance degree : + 4.0 control lever position degree : tolerance degree : +-Setting point w/out bumper spring Rated speed rom 250 rack travel mm 6.00: **←** 0.10 Tolerance mm Testing: Rated speed rpm : 250 rack travel mm 6.50 Tolerance mm : + 0.102.00 rack travel mm Rated speed rpm 400 Tolerance 1/min TORQUE CONTROL 700 Rated speed rpm rack travel mm 12.15 : +- 0.05Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm : Pressure hPa 1500 : 12.15 rack travel mm Tolerance mm : + - 0.05500 Rated speed rom Pressure hPa 8.50 rack travel mm : + 0.15 Tolerance mm **MEASUREMENT** Rated speed rpm 500 900 Pressure hPa 3.20 rack travel mm : +- 0.15 Tolerance mm 140 Pressure hPa 0.25 rack travel mm Tolerance mm : + - 0.05

Aneroid pressure
hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 4.0

Rated speed rpm : 100 rack travel mm : 17.00 Tolerance mm : + 1.00

STARTING FUEL DELIVERY

LOW IDLE Rated speed rpm : 250 Rack travel in mm : 6.50 : + 0.10Tolerance mm Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.Spreed

cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000S. : ← 6.0
Spreed
Tolerance
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000S. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.02.98 : ISO 4113 Test oil

Combination No. : 0 401 876 784

Injection pump

Pump designation : PE6P12OA32ORS3189 EP type number : 0 411 826 759

Governor

Governer design. : RSV650...750P4A421

: -14

: 0 421 833 467 Governer no.

Cust. part No. : 864537 P09 v.05/96

Customer-spec. information Customer : PENTA : TWD 710 G Motor Power KW : 154.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temo. °C Tolerance °C

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 100 Tolerance l/h : + 20.0

Test nozzle holde assembly : 1 688 901 019

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.65
Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 0.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: **←** 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm	: 700 †		
		FULL LOAD DELIVERY	AT FULL LOAD STOP
Rack travel in mm	: 9.30		
Tolerance mm	: +- 0.05	•	700
	<u> </u>	Aneroid pressure	
Del. quantity	100.0	hPa :	_
cm3/1000 strokes	: 190.0	Del. quantity cm3/1000 strokes :	190.0
Tolerance	I	Tolerance	170.0
cm3/1000 strokes	: ← 1.0 ÷	cm3/1000 strokes :	+- 1.0
0.110. 1000 001 01100	+	Check tolerance	
Check tolerance	+		+- 4.0
cm3/1000s.	: + 4.0 +	Spreed	
- I		Tolerance	
Spreed	. †	cm3/1000 strokes :	6.0
Tolerance	Ĭ	Check tolerance cm3/10009.	9.0
cm3/1000 strokes	: 6.0	CIID7 10005:	7.0
CIRCY TOOO SET ONCS	. 0.0		
Check tolerance	+		
cm3/1000s.	: 9.0	CONTROL LEVER	
	†	control lever	/0.0
9-4-ad amound man	. 450	position degree :	
Rated speed rpm	: 650	tolerance degree :	
Rack travel in mm	: 3.20	control lever	
Tolerance mm	: + 0.10 +	position degree :	90.0
Del. quantity	+	tolerance degree :	
cm3/1000 strokes	: 22.0	_	
Tolerance	+	RATED SPEED	
cm3/1000 strokes	: + 2.0	rack travel mm :	8.30
Check tolerance	†	Rated speed rpm :	752
cm3/1000s.	: + 5.0	Tolerance 1/min :	+ 3
Spreed Tolerance	Ī	rack travel mm :	4,00
cm3/1000 strokes	: 5.0	Rated speed rpm :	
Check tolerance	+	Tolerance 1/min :	+ 7
cm3/1000s.	: 8.0		
	+	rack travel mm :	0.85
			+- 0.55
(B) SETTING OF INJ	JECTION PUMP	Rated speed rpm :	900
WITH GOVERNOR	I	ASSEMBLY GOVERNOR S	FTTING
	1	ADDE DE L'OG ENTION O	F11740
		Rated speed rpm :	750
GUIDE SLEEVE POSIT	TION	rack travel mm :	
	+		7779
	†	Rated speed rpm :	776
control lever	†	Tolerance 1/min :	+- 4 4 00
position degree	: - 3	rack travel mm :	4.00
Rated speed rpm	. 000	rack travel mm :	0.85
Rack travel in mm	: 0.50		+ 0.55
Tolerance mm		Rated speed rpm :	900
रक्षण जा स्थल भागा	1	• • • • • •	
governor spring	+		
pre-tension	+	Rated speed rpm :	751
click setting x	: 4.00	rack travel mm :	8.30
5 27			
D26			

		+
Rated speed rpm	: 777	+ control lever
Tolerance 1/min	: ← 4	position degree : 84.0
rack travel mm		tolerance degree : + 4.0
		+
rack travel mm	: 0.85	control lever
		position degree : 34.0
Tolerance mm Rated speed rpm	900	tolerance degree : + 4.0
varen sheen this	. 700	1 toterance degree . 1 4.0
		Testing:
Rated speed rpm	. 750	T resumg.
rack travel mm	. 772	Rated speed rpm : 650
rack travet mm	: 0.30	rateu speed rpm . 000
Dadad amand sus	. 770	rack travel mm : 3.20 Tolerance mm : + 0.10
Rated speed rpm	: 778	† Toterance mm : + U.TU
Tolerance 1/min		2.00
rack travel mm	: 4.00	+ rack travel mm : 2.00
	0.05	+ Rated speed rpm : 660
rack travel mm		+ Tolerance 1/min : +- 30
Tolerance mm		†
Rated speed rpm	: 900	+ SET IDLE AUXILIARY SPRING
		†
		+ rack travel mm : 2.00
Rated speed rpm		+
rack travel mm	: 8.30	
		+ TORQUE CONTROL
Rated speed rpm	: 779	+ Rated speed rpm : 700
Tolerance 1/min		+ rack travel mm : 9.30
rack travel mm	_	+ Tolerance mm : $+$ 0.05
		1
rack travel mm	: 0.85	1
Tolerance mm		1
Rated speed rpm		1
nated opeca i pik	. 755	1
Rated speed rpm	• 754	STARTING FUEL DELIVERY
rack travel mm		1 OFFICE SEELER
I GCK CLSIACC 1888	. 0.30	Rated speed rpm : 100
Rated speed rpm	: 780	rack travel mm : 20.50
Tolerance 1/min		Tolerance mm : + 0.50
	4.00	T rocerance man
rack travel mm	: 4.00	T
mank Amazus I ma	. 0.05	Ţ
rack travel mm		T
Tolerance mm		LOUTOUE
Rated speed rpm	: 900	+ LOW IDLE
		† 2-1-d (CO
	700	+ Rated speed rpm : 650
Rated speed rpm		†
rack travel mm	: 8.30	+ Rack travel in mm: 3.20
		+ Tolerance mm : ← 0.10
Rated speed rpm		+ Del. quantity
Tolerance 1/min		+ cm3/1000 strokes : 22.0
rack travel mm	: 4.00	+ Tolerance
		+ cm3/1000 strokes : +- 2.0
rack travel mm		+ Check tolerance
Tolerance mm		+ cm3/1000s. : +- 5.0
Rated speed rpm		Spreed
	•	Tolerance
		+ cm3/1000 strokes : 5.0
LOW IDLE		+ Check tolerance
COM TACK		+ cm3/1000s. : 8.0
		1 0110

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16,02,98 Edition Test oil : ISO 4113

Combination No. : 0 401 876 794

Injection pump

Pump designation: PE6P120A320RS3206-3 EP type number : 0 411 826 809

Governor

Governer design. : RSV250...1100P1A560

: -2

: 0 421 833 471 Governer no.

Cust. part No. : 865560-P08 v. 09/97

Customer-spec. information Customer : PENTA : TAD 730 P Motor : 210.0 Power KW

TEST BENCH REQUIREMENTS

: 3.1 Inlet line

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C Tolerance *C

Overflow valve : 2 417 413 077

Inlet press. bar : 2.5

Overflow quantity

: 260 min. L/h Tolerance l/h: +-20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar :+ 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05 : + 0.05 Tolerance mm Check

tolerance mma : **←** 0.10

Rack travel in mm: 10.50 Tolerance mn: + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 700

4	Aneroid pressure
-	hPa : -
Rack travel in mm: 9.45	Del. quantity
Tolerance mm : $\leftarrow 0.05$	cm3/1000 strokes : 197.0
Del. quantity	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 197.0	Check tolerance
ties strokes . This	cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : + 1.0 +	Tolerance
Check tolerance	cm3/1000 strokes : 6.0 Check tolerance
cm3/1000s. : + 4.0	cm3/1000s. : 9.0
7.0	CRD7 (0000). 7.0
Spreed	
+	
Tolerance + cm3/1000 strokes : 6.0 +	CONTROL LEVER
T	control lever
Check tolerance	position degree : 119.0
cm3/1000s. : 9.0 +	tolerance degree : +- 4.0
+	
†	RATED SPEED
Rated speed rpm : 250	rack travel mm : 8.45 Rated speed rpm : 1145
T	Tolerance 1/min : +- 5
Rack travel in mm: 5.20	
Tolerance mm : + 0.10	rack travel mm : 4.00
Del. quantity	Rated speed rpm : 1195
cm3/1000 strokes : 20.0	Tolerance 1/min : +- 15
cm3/1000 strokes : + 3.0	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1000s. : +- 6.0	Rated speed rpm : 1300
Spreed +	
Tolerance + cm3/1000 strokes : 5.0 +	
Check tolerance	
cn3/1000s. : 8.0	LOW IDLE
+	
(5) 05-1110 05 1111505-1111	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 82.0
ATTI GOSEVIAN	tolerance degree : +- 4.0
\	-
+	Testing:
GUIDE SLEEVE POSITION +	Dated aread one . 350
Ĭ	Rated speed rpm : 250
control lever	rack travel mm : 5.20 Tolerance mm : + 0.10
position degree : -3	
. +	rack travel mm : 2.00
governor spring	Rated speed rpm : 330
pre-tension + click setting x : 6.00 +	Tolerance 1/min : + 30
7	
	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 700
Poted around from 1 200	rack travel mm : 9.45 Tolerance mm : + 0.05
Rated speed rpm : 700 +	TO CETATIVE HAIT : TO U.UD

E02

LOW IDLE

Rated speed rpm	:	250
Rack travel in mm Tolerance mm	: +	5.20 - 0.10
Del. quantity cm3/1000 strokes Tolerance	:	20.0
cm3/1000 strokes Check tolerance	: +	- 3.0
cm3/1000s. Spreed	: +	- 6.0
Tolerance cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.02.98 : ISO 4113 Test oil

Combination No. : 0 401 876 801

Injection pump

Pump designation : PE6P120A320RS3375 EP type number : 0 411 826 817

Governor

Governer design. : RSV250...900P0A646 Governer no. : 0 421 833 562

Cust. part No. : 3826154 PO2 v.06.96

Customer-spec. information Customer : PENTA : TWD 710P Motor : 168.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : **←** 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : Tolerance bar $: \leftarrow 0.1$

Overflow quantity

min. l/h : 260 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar :+ 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : 2.65 : + 0.05 Tolerance mm Check

tolerance mm

Rack travel in mm : 8.20

Tolerance mm: \leftarrow 0.50

Firing order : 1-5- 3- 6- 2-: 4

: + 0.10

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : ← 0.50 Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

	
Rack travel in mm : 8.15 Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
	- Rated speed rpm : 700
Del. quantity	- Aneroid pressure
cm3/1000 strokes : 155.0	· hPa : -
1	Del. quantity
Tolerance	- cm3/1000 strokes : 155.0
cm3/1000 strokes : + 1.0	- Tolerance
CHEST TOOL SET ONES . F 1.0	
	- cm3/1000 strokes : + 1.0
Check tolerance	- Check tolerance
cm3/1000s. : $+$ 4.0	- cm3/1000s. : +- 4.0
	- Spreed
Spreed	- Tolerance
1	- cm3/1000 strokes : 5.0
Tolerance	Check tolerance
cm3/1000 strokes : 5.0	- cm3/1000s. : 8.0
+	•
Check tolerance	•
cm3/1000s. : 8.0	
1	- CONTROL LEVER
	OUTTION DEVEN
7	-
1	control lever
Rated speed rpm : 250 , +	- position degree : 37.0
+	- tolerance degree : +- 4.0
Rack travel in mm: 5.00	•
Tolerance and : + 0.10	- control lever
Dei. quantity	position degree : 87.0
cm3/1000 strokes : 23.0 +	tolerance degree : +- 4.0
Tolerance	•
cm3/1000 strokes : + 3.0	- RATED SPEED
Check tolerance	- rack travel mm : 7.15
cm3/1000s. : $+$ 5.0	- Rated speed rpm : 920
Spreed	Tolerance 1/min : + 5
Tolerance	roter ance mann.
cm3/1000 strokes : 5.0	rack travel mma : 4.00
Check tolerance +	Rated speed rpm : 955
cm3/1000s. : 8.0 +	- Tolerance 1/min : +- 15
+	•
1	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	Tolerance mm : + 0.55
WITH GOVERNOR	
MILLI GOVERNOR	Rated speed rpm : 1050
†	•
+	•
	•
GUIDE SLEEVE POSITION	
	- LOW IDLE
<u>1</u>	
T	-
control lever	
position degree : -3 +	control lever
Rated speed rpm : 800 +	- position degree : 71.0
4	tolerance degree : +- 4.0
Rack travel in mm: 0.50	•
Tolerance mm : + 0.20	control lever
TO COT CHINE IMP	
. †	position degree : 21.0
governor spring +	tolerance degree : +- 4.0
pre-tension +	•
click setting x : 2.00	Setting point w/out bumper spring
	the state of the s

Rated speed rpm	:	250
rack travel man	:	4.50
Tolerance mm	: +-	0.10

Testing:

Rated speed rpm : 250 rack travel mm : 5.00 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 345
Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 8.15 Tolerance mm : + 0.05

LOW IDLE

Rated speed rpm : 250

Rack travel in mm: 5.00 Tolerance mm: + 0.10 Del. quantity

cm3/1000 strokes : 23.0 Tolerance

cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. : +- 5.0 Spreed

Tolerance cm3/1000 strokes : 5.0 Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 12.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 802

Injection pump

Pump designation : PE6P120A320RS3206-1 EP type number : 0 411 826 775

Governor

Governer design. : RSV250...900P4A550

: -1

Governer no. : 0 421 833 427

Cust. part No. : 866383-P06 V. 06.96

Customer-spec. information Customer : PENTA Motor : TWD1210P

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

damper.

(RoBo diaphraga) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.50
Tolerance mm : ← 0.05

Check tolerance mm

Rack travel in mm : 11.30

Tolerance mm : 47.50

Firing order : 1-5-3-6-2-

: 4

: + 0.10

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

	+
BASIC SETTING	governor spring pre-tension
DASIC SETTING	t click setting x : 4.00
Rated speed rpm : 700	İ
	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 11.35 Tolerance mm : +- 0.05	Rated speed rpm : 700
Total de tala	+ Rated speed rpm : 700 + Aneroid pressure
Del. quantity	hPa : -
cm3/1000 strokes : 252.0	+ Del. quantity + cm3/1000 strokes : 252.0
Tolerance	Tolerance
cm3/1000 strokes : + 1.0	+ cm3/1000 strokes : + 1.0
Check tolerance	+ Check tolerance + cm3/1000s. : 4- 4.0
cm3/1000s. : +- 4.9	Spreed
Spread	Tolerance : 6.0
Spreed	+ Check tolerance
Tolerance	cm3/1000s. : 9.0
cm3/1000 strokes : 6.0	İ
Check tolerance	
m3/1000s. : 9.0	CONTROL LEVER
	control lever
Pated aroud pro a 700	position degree : 61.0
Rated speed rpm : 300	tolerance degree : + 4.0
Rack travel in mm: 5.10	control lever
olerance mm : +- 0.10	<pre>position degree : 111.0 tolerance degree : + 4.0</pre>
Del. quantity mm3/1000 strokes : 23.0	toterance degree : 4.0
Tolerance	RATED SPEED
m3/1000 strokes : +- 3.0 Check tolerance	rack travel mm : 10.35
m3/1000s. : +- 6.0	+ Rated speed rpm : 930 + Tolerance 7/min : +- 5
Spreed	+
olerance m3/1000 strokes : 5.0	+ rack travel mm : 4.00 + Rated speed rpm : 970
heck tolerance	Tolerance 1/min : + 15
m3/1000s. : 8.0	+
	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1100
IITH GOVERNOR	+
	Į
GUIDE SLEEVE POSITION	T LOW IDLE
	Ţ
control lever	control lever
position degree : -3 Rated speed rpm : 800	<pre>position degree : 80.0 tolerance degree : +- 4.0</pre>
	+
Rack travel in mm: 0.50	control lever
Tolerance mm : + 0.20	+ position degree : 30.0

tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm 300 : rack travel mm 4.60 Tolerance mm : + 0.10

Testing:

300 Rated speed rpm rack travel mm 5.10 Tolerance m : + 0.10

rack travel mm 2.00 Rated speed rpm : 370 Tolerance 1/min : +-30

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm 11.35 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

100 Rated speed rom : rack travel mm : 20.50 Tolerance mm : **←** 0.50 Del. quantity

cm3/1000 strokes : 292.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s.: **←** 19.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 5.10 : **←** 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s.6.0

Spreed

Tolerance

cm3/1000 strokes : 5.0 Check tolerance

: cm3/1000s.

8.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 803

Injection pump

Pump designation : PE6P110A320RS3266 EP type number : 0 411 816 777

Governor

Governer design. : RSV350...1250P0A578 Governer no. : 0 421 833 434

Cust. part No. : 866200-P06 v.10/97

Customer—spec. information
Customer : PENTA
Motor : TWD 630VE
Power KW : 140.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 9.40 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING	
Rated speed rpm	: 700
Rack travel in mm Tolerance mm	: 12.00 : + 0.05
Del. quantity cm3/1000 strokes	: 133.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 3.0
Spreed	
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 8.0
Rated speed rpm	: 350
Rack travel in mm Tolerance mm Del. quantity	5.50 : + 0.10
cm3/1000 strokes	: 19.0
Tolerance cm3/1000 strokes	: + 2.0
Check tolerance cm3/1000s. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 8.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP
GUIDE SLEEVE POSI	TION
control lever position degree	: - 3
governor spring pre-tension	

FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm	: 700
Aneroid pressure	
hPa	: 1200
Del. quantity	
cm3/1000 strokes	: 133.0
Tolerance	
cm3/1000 strokes	: ← 1.0
Check tolerance	
cm3/1000s.	: ← 3.0
Spreed	
Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance	. ,
cm3/1000s.	: 8.0
CIII 7 10000 .	. 0.0
RATED SPEED	
rack travel mm	: 11.00
Rated speed rpm	: 1280
Tolerance 1/min	: ← 5
TO COT CITIES TO THE FITT	
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 1400
(1.11)	
rack travel mm	: 4.00
Rated speed rpm	: 1345
Tolerance 1/min	: +- 15
LOW IDLE	
COM INCE	
Setting point w/o	out bumper spring
Rated speed rpm	: 350
rack travel mm	: 5.00
Tolerance mm	: +- 0.10
Testing:	
Rated speed rpm	: 350
rack travel mm	: 5.50
Tolerance mm	: +- 0.10

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 12.00 Tolerance mm : + 0.05

governor spring pre-tension

click setting x: 2.50

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1200
rack travel mm	:	12.00
Tolerance man	: 4	- 0.0 5

Rated speed rpm	:	500
Pressure hPa	:	_
rack travel mm	:	9.40
Toterance man	: +-	0.20

MEASUREMENT

Rated speed rpm : 50	Rated	speed	rpm	:	500
----------------------	-------	-------	-----	---	-----

Pressure hPa	:	710
rack travel mm	:	2.30
Tolerance mm	: +	- 0.20

Pressure hPa	:	240
rack travel mm	:	0.25
Tolerance mm	: +-	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid	pressure
---------	----------

hPa	:	-
Rated speed rpm	:	700
Del. quantity		

cm3/1000 strokes : 80.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	20.50
Tolerance mm	: +	- 0.50
Del. quantity		
cm3/1000 strokes	:	190.0
Tolerance		

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm	:	350	
Rack travel in mm Tolerance mmm Del. quantity	: +	5.50 0.10	
cm3/1000 strokes	:	19.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	5.0	
Spreed Tolerance			
cm3/1000 strokes	:	5.0	
Check tolerance cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.02.98

Combination No. : 0 401 876 804

Injection pump

Pump designation : PE6P12OA32ORS3339 EP type number : 0 417 826 812

Governor

Governer design. : RSV325...1400P0A590

Governer no. : 0 421 833 450

Cust. part No. : 3825199-P06 v. 9/95

Customer-spec. information Customer : PENTA

Motor : TAMD63 L Power KW : 228.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40

Tolerance *C : +--2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Tolerance l/h: + 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0

Tolerance bar $: \leftarrow$ 1.0

Prestroke mm : 3.55

Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 6.50 Tolerance mm : \leftarrow 0.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 8.90

Tolerance ma: \leftarrow 0.05

_	+ Aneroid pressure
Del. quantity	hPa : 2000
cm3/1000 strokes : 141.0	Del. quantity
Tolerance	cm3/1000 strokes : 141.0 Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : +- 1.0
	Check tolerance
Check tolerance - cm3/1000S. : ← 4.0 -	+ cm3/1000s. : +- 4.0 + Spreed
CHO/10003: 1 = 4,0	Tolerance
Spreed -	cm3/1000 strokes : 5.0
₩alaman a	Check tolerance
Tolerance - cm3/1000 strokes : 5.0 -	cm3/1000s. : 9.0
the root strongs.	
Check tolerance	
cm3/1000s. : 9.0	CONTROL LEVER
	control lever
-	position degree : 68.0
Rated speed rpm : 325	tolerance degree : +- 4.0
Rack travel in mm: 3.80	t control lever
Tolerance mm : + 0.10	position degree : 118.0
Del. quantity -	tolerance degree : +- 4.0
cm3/1000 strokes : 23.0 - Tolerance -	† RATED SPEED
cm3/1000 strokes : +- 3.0	rack travel mm : 7.90
Check tolerance	Rated speed rpm : 1470
cm3/1000s. : \leftarrow 6.0	Tolerance 1/min : + 5
Spreed - Tolerance -	† - rack travel mm : 4.00
cm3/1000 strokes : 5.0	Rated speed rpm : 1530
Check tolerance -	Tolerance 1/min : + 15
cm3/1000S. : 8.0 -	+
	rack travel mm : 0.85 Tolerance mm : + 0.55
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1630
WITH GOVERNOR -	
•	†
GUIDE SLEEVE POSITION -	LOW IDLE
	İ
control lever	control lever
position degree : - 3	position degree : 82.0
Rated speed rpm : 800 -	tolerance degree : + 4.0
Rack travel in mm : 0.55	t - control lever
Tolerance mm : + 0.25	position degree : 32.0
	tolerance degree : +- 4.0
governor spring - pre-tension -	† Setting point w/out bumper spring
click setting x : 5.00	Toerring bottle woode pumper shalld
	Rated speed rpm : 325
FIRE LOAD BELTWED AT THE LOAD STOR	rack travel mm : 3.30
FULL LOAD DELIVERY AT FULL LOAD STOP -	Tolerance mm : + 0.20
_	,

Testing:

Rated speed rpm : 1000

Rated speed rpm : 325 rack travel mm : 3.80 : +- 0.10 Tolerance mm

rack travel mm : Rated speed rpm : 2.00 460 Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 8.90 Tolerance mm : + 0.05

Rated speed rpm : 1400 rack travel mm : 8.90 rack travel mm : : + 0.10 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa 2000 8.90 rack travel mm : **←** 0.05 Tolerance mm

Rated speed rpm : 500 Pressure hPa Pressure hPa : rack travel mm : 6.50 : + 0.10Tolerance and

MEASUREMENT

Rated speed rpm : 500

850 Pressure hPa : 2.00 rack travel mm : : + 0.15Tolerance mm

: 490 Pressure hPa rack travel mm : 0.25 : + 0.05Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 2000 Rated speed rom : 1400 Del. quantity

cm3/1000 strokes : 128.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance : +- 6.0 cm3/1000s.

Aneroid pressure

hPa Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 93.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: +- 4.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.00 Tolerance mm : +- 0.25

LOW IDLE

Rated speed rpm : 325

3.80 Rack travel in mm: Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 23.0 Tolerance

cm3/1000 strokes : - 3.0 Check tolerance

cm3/1000s.

: +- 6.0 Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.02.98 Test oil : ISO 4113

Combination No. : 0 401 876 809

Injection pump

Pump designation : PE6P120A320RS3355 EP type number : 0 411 826 814

Governor

6overner design. : RSV325...1200P1A605

Governer no. : 0 421 833 487

Cust. part No. : 3825834 PO5 v.05/96

Customer-spec. information Customer : PENTA : TWD 731 E Motor Power KW : 175.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance *C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.5 : + 0.1 Tolerance bar

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 3.45 : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 7.80 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 10.60 Tolerance mn: + 0.05

	+ Aneroid
Del. quantity cm3/1000 strokes : 126.0	hPa Del. qua
	+ cm3/1000
Tolerance cm3/1000 strokes : +- 1.0	+ Tolerand + cm3/1000
CHIST TOOU SET ONES . 4- 1.0	Check to
Check tolerance	+ cm3/1000
$cm3/1000s.$: \leftarrow 4.0	+ Spreed + Tolerand
Spreed	- cm3/1000
	+ Check to
Tolerance cm3/1000 strokes : 7.0	t cm3/1000
Charles : 7.0	Ţ
Check tolerance	+
cm3/1000s. : 11.0	CONTROL
	control
	position
Rated speed rpm : 325	tolerand
Rack travel in mm: 4.40	control
Tolerance mm : + 0.10	+ position
Del. quantity	+ tolerand
cm3/1000 strokes : 24.0 Tolerance	T RATED SE
cm3/1000 strokes : +- 2.5	rack tra
Check tolerance	+ Rated sp
cm3/1000s. : + 5.0 Spreed	Tolerand
Tolerance	T rack tra
cm3/1000 strokes : 3.0	Rated sp
Check tolerance	+ Tolerand
cm3/1000s. : 6.0	rack tra
	Tolerand
(B) SETTING OF INJECTION PUMP	Rated sp
WITH GOVERNOR	İ
	Ţ
GUIDE SLEEVE POSITION	101 7016
GOIDE SLEEVE POSITION	LOW IDLE
	+
control lever	+ control
position degree : - 3 Rated speed rpm : 800	+ position
reduced speed i pili	- cocerain
Rack travel in mm: 0.85	control
Tolerance mma : + 0.55	+ position
governor spring	tolerand
pre-tension	Setting
click setting x : 6.00	+
	Rated sp
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack tra + Tolerand
	+
Rated speed rpm : 1200	+ Testing:

Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 4.0
CONTROL LEVER	
control lever position degree tolerance degree	: 71.0 : + 4.0
control lever position degree tolerance degree	: 121.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 9.60 : 1230 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1284 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : 0.55 : 1400
LOW IDLE	
control lever position degree tolerance degree	: 81.0 : + 4.0
control lever position degree tolerance degree	: 31.0 : + 4.0

point w/out bumper spring

speed rpm : 325
ravel mm : 3.90
nce mm : + 0.10

Rated speed rpm : 325
rack travel mm : 4.40
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 390
Tolerance 1/min : +- 30

TORQUE CONTROL

Rated speed rpm : 1200 rack travel mm : 10.60 Tolerance mm : + 0.05

Rated speed rpm : 700 rack travel mm : 10.60 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 10.60 Tolerance mm : + 0.05

Rated speed rpm : 500
Fressure hPa : rack travel mm : 7.80
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 780
rack travel mm : 2.50
Tolerance mm : + 0.15

Pressure hPa : 260
rack travel mm : 0.25
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 147.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. :

cm3/1000S. : +- 6.0 Spreed

Tolerance

cm3/1000 strokes : 7.0

Check tolerance

cm3/1000s. : 11.0

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity

cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000S. : +- 4.0

LOW IDLE

Rated speed rom : 325

Rack travel in mm: 4.40
Tolerance mm: +- 0.10

Del. quantity

cm3/1000 strokes : 24.0

Tolerance

cm3/1000 strokes : +- 2.5

Check tolerance

cm3/1000s. : +- 5.0 Spreed

Toterance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.02.98 Edition Test oil : ISO 4113

Combination No. : 0 402 076 795

Injection pump

Pumo designation : PES6P120A720RS3369 EP type number : 0 412 026 789

Governor

Governer design. : RSV450...1075P5A631

Governer no. : 0 421 833 538

Cust. part No. :

Customer-spec. information

Customer : IVECO-FIAT : 8365.26.584 Motor

: 144.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 034

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance "NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1075

Rack travel in mm: 10.75 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 136.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: +- 4.0

Spreed

Tolerance cm3/1000 strokes : 5.0	Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 9.0	
	CONTROL LEVER
150	control lever
Rated speed rpm : 450	position degree : 114.0 tolerance degree : + 4.0
Rack travel in mm: 5.90	
Tolerance mm : + 0.10	RATED SPEED
Del. quantity cm3/1000 strokes : 25.0	rack travel mm : 9.60 Rated speed rpm : 1150
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0	Chesk
Check tolerance	speed 1/min : + 10
cm3/1000s. : + 6.0	
Spreed Tolerance	rack travel mm : 4.00 Rated speed rpm : 1195
cm3/1000 strokes : 8.0	Rated speed rpm : 1195 Tolerance 1/min : +- 15
Check tolerance	TO SOLICIO TO HELLE 6 TO 12
cm3/1000s, : 12.0	rack travel mm : 0.85
+	Tolerance mm : \leftarrow 0.55
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1400
WITH GOVERNOR	rack travel ma : 4.00
	Rated speed rpm : 1235
+	Tolerance 1/min : + 15
	Check
GUIDE SLEEVE POSITION	speed 1/min : ← 20
control lever	
position degree : -3 Rated speed rpm : 800	LOW IDLE
rated speed rain . ooo	LOW IDEE
Rack travel in mm: 0.50	
Tolerance mm : + 0.20	control lever
	position degree : 88.0 tolerance degree : +- 4.0
governor spring pre-tension	tolerance degree : +- 4.0
click setting x : 3.50	Setting point w/out bumper spring
	Rated speed rpm : 450
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.40
+	Tolerance mm : + 0.10
Rated speed rpm : 1075	Tophina
Aneroid pressure hPa : 900	Testing:
Del. quantity	Rated speed rpm : 450
cm3/1000 strokes : 136.0 +	rack travel mm : 5.90
Tolerance	Tolerance mm : +- 0.10
cm3/1000 strokes : + 1.0	mack tensual men and 200
Check tolerance + 4.0 +	rack travel mm : 2.00 Rated speed rpm : 650
Spreed	Tolerance 1/min : +- 50
Tolerance	
cm3/1000 strokes : 5.0	TARRIUM CANTEC:
+	TORQUE CONTROL

Rated speed rpm	
rack travel mm Tolerance mm	: 10.75 : ← 0.05
Rated speed rpm	: 700
rack travel mm Tolerance mm	: 10.80 : + 0.10
Rated speed rpm	: 320
Rated speed rpm rack travel mm Tolerance mm	: 11.30
lorelance ma	: + 0.20
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 500 : 900 : 10.75 : ← 0.10
rack travel mm	: 10.75
Tolerance mm	: +- 0.70
Rated speed rpm	
Pressure hPa	. 0.00
rack travel mm Tolerance mm	: 9.80 : +- 0.20
TOTE! CA ICE IMI	0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 515
rack travel mm	: 10.35
Tolerance mm	: ← 0.05
FUEL DELIVERY CHA	RACTERISTICS

Aneroid pressure	^-
hPa	: 900
Rated speed rpm Del. quantity	: 700
cm3/1000 strokes	: 137.0
Tolerance	
cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s.	: + 6.0
JIII 150001	
rack travel mm	: 11.30
Tolerance mm	: + 0.20
Aneroid pressure	
hPa	•
Rated speed rpm	: 500

	:	85.0	
Tolerance cm3/1000 strokes Check tolerance	: +-	1.0	
cm3/1000s.	: +-	4.0	
STARTING FUEL DELI			
Rated speed rpm	:	100	
rack travel mm	:	9.60	
Tolerance mm	: +-	0.30	
Del. quantity			
cm3/1000 strokes	:	95.0	
Tolerance		45.0	
cm3/1000 strokes Check tolerance	: +-	15.0	
cm3/1000S.		19.0	
LOW IDLE			
Rated speed rpm	:	45C	
Rack travel in mm	:	5.90	
Tolerance mm	: +-	5.90 0 .10	
Tolerance mm Del. quantity	: +-	0.10	
Tolerance mm Del. quantity cm3/1000 strokes	: +-		
Tolerance mm Del. quantity cm3/1000 strokes Tolerance		0.10 25.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: +-	0.10	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance		0.10 25.0 3.0	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed		0.10 25.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance		0.10 25.0 3.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes		0.10 25.0 3.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance		0.10 25.0 3.0 6.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes		0.10 25.0 3.0 6.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.02.98 Test oil : ISO 4113

Combination No. : 0 402 616 803

Injection pump

Pump designation : PE6P130A30CRS7274 EP type number : 0 412 636 824

Governor

Governer design. : Governer no.

Cust. part No. : 866146-P03 v. 10.94

Customer-spec. information Customer : PENTA

: TAD1230G (GENSET) Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar 0.1

Tolerance l/h: +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm Tolerance mm : **←** 0.05 Check

tolerance mm

: ← 0.10

Rack travel in mm : 12.90 Tolerance mm : ← 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

: 1 Barrel no.

BASIC SETTING

700 Rated speed rpm :

Rack travel in mm : 12.90

Tolerance mm	: - 0.10
Del. quantity cm3/1000 strokes	: 400.0
Tolerance cm3/1000 strokes	: + 1.5
Check tolerance cm3/1000S.	: ← 5.0
Spreed	
Tolerance cm3/1000 strokes	: 8,0
Check tolerance cm3/1000s.	: 12.0
Rated speed rpm	: 300
Rack travel in mm Tolerance mm Del. quantity	4.00 : +- 0.30
cm3/1000 strokes	: 23.0
Tolerance cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000S. Spreed	: ← 6.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000S.	: 8.0
(B) SETTING OF IN WITH GOVERNOR	WECTION PUMP
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Dat d speed see	700

Rated speed rpm Ameroid pressure	:	700
hPa	:	
Del. quantity		
cm3/1000 strokes	:	400.0
Tolerance		
cm3/1000 strokes	: +	- 1.5
Check tolerance		
cm3/1000s.	: +	- 5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

LOW IDLE					
Testing:					
Rated speed rpm rack travel mm Tolerance mm	:	+	300 4.00 0.30		
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	•		700 12.90 0.10	POP Parmus reg	
LOW IDLE	**		300	 	
Rated speed rpm			390 4. 0 0		
Rated speed rpm Rack travel in mm Tolerance mm		+-			
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	:	+-	4.00		
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	•	+-	4.00 0.30 23.0		
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	•	+-	4.00 0.30 23.0 3.0		
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	•	+-	4.00 0.30 23.0		
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	• • • • • • • • • • • • • • • • • • • •	+-	4.00 0.30 23.0 3.0 6.0		
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	•	+-	4.00 0.30 23.0 3.0		

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 402 616 804

Injection pump

Pump designation : PE6P12DA30DRS7289 EP type number : 0 412 626 883

Governor

Governer design. : Governer no. :

Cust. part No. : 866145-P04 v. 11/96

Customer spec. information Customer : PENTA Motor : TAD 1030 G

Power KW : 229.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.45
Tolerance mm : + 0.05
Check

Lneck

tolerance mm : + 0.10

Rack travel in mm : 10.50Tolerance mm : +0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

...

Rack travel in mm Tolerance mm	: 15.50 : + 0.05
Del. quantity cm3/1000 strokes	: 361.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed	
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 10.0
Rated speed rpm	: 300
Rack travel in mm Toterance mm Del. quantity	: 8.00 : ← 0.20
cm3/1000 strokes	: 23.0
Tolerance cm3/1000 strokes Check tolerance	: ← 3.0
cm3/1000s. Spreed	: ← 6.0
Tolerance	
cm3/1000 strokes Check tolerance	: 7.0
cm3/1000s.	: 11.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm	: 700
Aneroid pressure hPa	: -
Del. quantity cm3/1000 strokes	: 361.0
Tolerance cm3/1000 strokes	: - 1.0
Check tolerance cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 6.0

Check tolerance cm3/1000s.	:		10.0	
LOW IDLE				
Testing:				
Rated speed rpm rack travel mm Tolerance mm	:	+	300 8.00 0.20	
TORQUE CONTROL Rated speed rp% rack travel mm Tolerance mm	•		700 15.50 0.05	
LOW IDLE	****			
LOW IDLE Rated speed rpm	•		300	
Rated speed rpm Rack travel in mm Tolerance mm			300 8.00 0.20	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	0 1 0		a.00	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes			ස.00 0.20	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed		+	8.00 0.20 23.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes		+ +-	8.00 0.20 23.0 3.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance		+ +-	8.00 0.20 23.0 3.0 6.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 16.02.98

Test oil

: ISO 4113

Combination No. : 0 402 646 632

Injection pump

Funo designation : PE6P12GA32GR87233

: -11

EP type number : 0 412 626 919

Governor

Governer design. : RQV300...1300PA1094K

Governer no. : 0 421 815 364

Cust. part No. : 866560 P03 v. 4/95

Customer-spec. information

Customer : PENTA Motor

: TAMD 72 A

Power KW

: 316.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter:

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm

Tolerance mm : +- 0.05

Check

tolerance mm

: +- 0.10

Rack travel in mm : 7.60 Tolerance mm : + 0.50

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance

: **←** 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

		+ Tolerance mm : +- 0.25
BASIC SETTING		Rated speed rpm : 899 guide sleeve
Rated speed rpm	: 1300	travel mm : 6.99
nateu specu i pie	. 1300	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
		
Rack travel in m	n · 13 85	Rated speed rpm : 387
Tolerance mm		guide steeve
TOTAL CONTROL COMM	• • 0.05	travel mm : 2.54
Del. quantity		Tolerance ram : + 0.25
cm3/1000 strokes	· 250 0	Total direct days
	. 20.0	Rated speed rpm : 437
Tolerance		guide sleeve
cm3/1000 strokes	• - 10	travel mm : 3.05
CIADY 1000 OCTORCS		Tolerance mm : + 0.25
Check tolerance		1 10001 01100 111111 . 1 0.23
cm3/1000s.	: + 4.0	Rated speed rpm : 530
	· · · · · · · · · · · · · · · · · · ·	guide sleeve
Spreed		travel mm : 4.12
-p1 -00-4		Tolerance mm : + 0.25
Tolerance		TO LOT WITHOUT HAR . THE U. C.
cm3/1000 strokes	: 8.0	Rated speed rpm : 1640
CIRDY 1000 SETORES	. 0.0	guide steeve
Check tolerance		travel mm : 13.50
cm3/1000s.	: 11.0	Tolerance mm : + 0.50
CIID7 (0005).	. 17.0	Total differential . 4- 0.50
Rated speed rpm		GUIDE SLEEVE POSITION
Rack travel in m		+ control lever
Tolerance man	: ← 0.10	position degree : - 1
Del. quantity cm3/1000 strokes	. 49.0	Rated speed rpm : 1500
Tolerance	: 18.0	Rack travel in mm : 9.00
cm3/1000 strokes	• 🗕 3.0	Tolerance mm : + 3.00
Check tolerance	. 1- 3.0	
cm3/1000s.	: ← 5.0	
Spreed	. 1 - 5.0	FULL LOAD DELIVERY AT FULL LOAD STO
Tolerance		TOTE TOUR DESTREAM ALL TOTE FOUND STOR
cm3/1000 strokes	: 5.0	Rated speed rpm : 1300
Check tolerance		- Aneroid pressure
cm3/1000s.	: 8.0	hPa : 2400
	. 544	Del. quantity
		- cm3/1000 strokes : 250.0
(B) SETTING OF IN	JJECTION PUMP	Tolerance
WITH GOVERNOR	recommended to with	+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
		+ cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAV	/EL	Spreed
		+ Tolerance
Rated speed rpm	: 1345	+ cm3/1000 strokes : 8.0
guide sleeve		+ Check tolerance
travel mm	: 10.25	+ cm3/1900s. : 11.0
Tolerance mm	: + 0.25	+
Rated speed rpm	: 300	İ
guide sleeve	• 500	CONTROL LEVER
travel mm	: 1.65	JOHN TOLL SEPTIME
	1.05	•

control lever position degree : 66.0 tolerance degree : + 4.0 control lever position degree : 120.0 tolerance degree : + 4.0 control lever position degree : + 4.0 control lever position degree : + 4.0 control lever position degree : 1340 control lever position degree : 14.00 control lever position degree : 73.0 control lever position degree : + 4.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control lever position degree : - 73.0 control		
position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.80 Rated speed rpm : 1340 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1495 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 20.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 1.60	position degree	
Rated speed rpm : 1340 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1495 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance 1/min : + 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 20.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 13.85 Tolerance mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 11.60	position degree	
Rated speed rpm : 1495 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : + 4.0 control lever position degree : + 4.0 control lever position degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 13.85 Tolerance mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 800 rack travel mm : 11.60	rack travel mm Rated speed rpm	: 1340
Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 20.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 13.85 Tolerance mm : + 0.05	Rated speed rpm	: 1495
control lever position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 20.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. :> 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 13.85 Tolerance mm : + 0.05	Tolerance mm	: ← 0.50
position degree : 73.0 tolerance degree : + 4.0 control lever position degree : 20.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.60	LOW IDLE	
position degree : 20.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. :> 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 13.60	position degree	: 73.0 : + 4.0
Rated speed rpm : 200 CRT mm min. :> 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 13.60	position degree	
CRT mma main. : > 6.70 Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.60	Setting point w/o	ut bumper spring
Testing: Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.60	Rated speed rpm	: 200
Rated speed rpm : 300 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.60	CRT mm min.	: > 6.70
rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.60	Testing:	
TORQUE CONTROL Rated speed rpm : 1300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.60	rack travel mm	: 5.90
Rated speed rpm : 1300 rack travel mm : 13.85 Tolerance mm : + 0.05 Rated speed rpm : 800 rack travel mm : 11.60	Rated speed rpm	: 400
rack travel mm : 11.60	Rated speed rpm rack travel mm	: 13.85
	rack travel mm	: 11.60

Rated speed rpm	: 1000
rack travel mm	: 12.70 : + 0.20
Tolerance mm	: - 0.20
Rated speed rpm	: 1200
rack travel mm	
Tolerance mm	: + 0.20
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Durancal automateurs	. 4200
Rated speed rpm Pressure hPa	: 1300 : 2400
rack travel am	: 2400
Tolerance mm	: +- 0.05
Rated speed rpm	
Pressure hPa	: -
rack travel mm	: 7.60
Tolerance mm	: +- 0.10
MEASUREMENT	
Rated speed rpm	: 1300
•	
Pressure hPa	: 1580
rack travel mm	: 5.90
Tolerance mm	: +- 0.20
Processes And	: 370
Pressure hPa	
rack travel mm	: 0.25
	: 0.25 : ← 0.05
rack travel mm	
rack travel mm	
rack travel mm	: + 0.05
rack travel mm Tolerance mm	: + 0.05
rack travel mm Tolerance mm FUEL DELIVERY CH	: + 0.05
rack travel mm Tolerance mm	: + 0.05
rack travel mm Tolerance mm FUEL DELIVERY CHA	: ← 0.05 ARACTERISTICS
rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	: + 0.05 ARACTERISTICS : 2400 : 800
rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: + 0.05 ARACTERISTICS : 2400 : 800
rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: ← 0.05 ARACTERISTICS : 2400 : 800 : 236.0
rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: + 0.05 ARACTERISTICS : 2400 : 800
rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 0.05 ARACTERISTICS : 2400 : 800 : 236.0 : ← 3.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CH/ Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: ← 0.05 ARACTERISTICS : 2400 : 800 : 236.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CH/ Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: ← 0.05 ARACTERISTICS : 2400 : 800 : 236.0 : ← 3.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CH/ Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: ← 0.05 ARACTERISTICS : 2400 : 800 : 236.0 : + 3.0 : + 5.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CH/ Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: ← 0.05 ARACTERISTICS : 2400 : 800 : 236.0 : ← 3.0

Aneroid pressure hPa : 2400

rack travel mm	: 1000 : 12.70
Tolerance mma Del. quantity	: + 0.20
cm3/1000 strokes Tolerance	: 244.0
cm3/1000 strokes Check tolerance	: ← 4.0
cm3/1000s.	: +- 6.0

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 124.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance

LOW IDLE

cm3/1000s.

Rated speed rpm 300 5.90 Rack travel in mm: Tolerance mm : + 0.10Del. quantity cm3/1000 strckes : 48.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 5.0 Spreed Tolerance 5.0 cm3/1000 strokes : Check tolerance cm3/1000s.8.0

4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 18.12.97 : ISO 4113

Combination No. : 0 402 646 644

Injection pump

Pump designation : PE6P120A320RS7319 EP type number : 0 412 626 914

Governor

Governer design. : RQV300...1400PA1124

Governer no. : 0 421 814 086

Cust. part No. : 866633 PO4 D8.96

Customer-spec. information Customer : PENTA Motor : TAMD 63 P

: 265.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : + 2.0 Tolerance °C

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 : **←** 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.65 : **←** 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mma: 10.50 Tolerance mm: \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 12.90 Tolerance mm : \leftarrow 0.05

F02

Del. quantity	+ Tolerance mm : + 0.25
cm3/1000 strokes : 241.0	+
	Rated speed rpm : 498
Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 3.20
	+ Tolerance mm : + 0.25
Check tolerance	
cm3/1000s. : +- 4.0	+ Rated speed rpm : 690
VIII. 100001	+ guide steeve
Spreed	travel mm : 3.68
Op. 00 0	+ Tolerance mm : + 0.25
Tolerance	1 Total arise min
cm3/1000 strokes : 8.0	+ Rated speed rpm : 1638
The state of the s	+ guide sleeve
Check tolerance	travel mm : 10.00
cm3/1000s. : 11.0	Tolerance mm : + 0.25
. 11.0	T roter differ limit . F 0.25
	Rated speed rpm : 1760
	+ guide steeve
Rated speed rpm : 300	travel mm : 11.50
nated speed (pit . Dud	+ Tolerance mm : + 0.50
Rack travel in mm : 5.40	T roterance man : T 0.50
Tolerance man : + 0.10	T
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 23.0	T GOIDE STEERE POSTITION
	T
Tolerance	T annual laws
cm3/1000 strokes : + 3.0	+ control lever
Check tolerance	+ position degree : -1
cm3/1000s. : +- 5.0	+ Rated speed rpm : 1640
Spreed	†
lolaranca	+ Rack travel in mm : 9.00
Tolerance	
cm3/1000 strokes : 5.0	Tolerance mm : + 3.00
cm3/1000 strokes : 5.0 Check tolerance	· ·
cm3/1000 strokes : 5.0	Tolerance mm : + 3.00
cm3/1000 strokes : 5.0 Check tolerance	
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve travel mm : 7.69	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve travel mm: 1.24	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve travel mm : 7.69 Tolerance mm : + 0.25 Rated speed rpm : 300 guide sleeve travel mm : 1.24 Tolerance mm : + 0.25	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve travel mm: 1.24 Tolerance mm: + 0.25 Rated speed rpm: 1170	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 11.0
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve travel mm : 7.69 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.24 Tolerance mm : + 0.25 Rated speed rpm : 1170 guide sleeve	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve travel mm : 7.69 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.24 Tolerance mm : + 0.25 Rated speed rpm : 1170 guide sleeve travel mm : 5.67	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve travel mm : 7.69 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.24 Tolerance mm : + 0.25 Rated speed rpm : 1170 guide sleeve	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 11.0 CONTROL LEVER control lever
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve travel mm: 1.24 Tolerance mm: + 0.25 Rated speed rpm: 1170 guide sleeve travel mm: 5.67 Tolerance mm: + 0.25	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 54.0
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1456 guide sleeve travel mm : 7.69 Tolerance mm : 40.25 Rated speed rpm : 300 guide sleeve travel mm : 1.24 Tolerance mm : + 0.25 Rated speed rpm : 1170 guide sleeve travel mm : 5.67	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 11.0 CONTROL LEVER control lever
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve travel mm: 1.24 Tolerance mm: + 0.25 Rated speed rpm: 1170 guide sleeve travel mm: 5.67 Tolerance mm: + 0.25	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 54.0
Cm3/1000 strokes: 5.0 Check tolerance cm3/1000s.: 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm: 1456 guide sleeve travel mm: 7.69 Tolerance mm: + 0.25 Rated speed rpm: 300 guide sleeve travel mm: 1.24 Tolerance mm: + 0.25 Rated speed rpm: 1170 guide sleeve travel mm: 5.67 Tolerance mm: + 0.25 Rated speed rpm: 5.67 Tolerance mm: + 0.25	Tolerance mm : + 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 2000 Del. quantity cm3/1000 strokes : 241.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 CONTROL LEVER control lever position degree : 54.0

control lever position degree tolerance degree	: 119.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.90 : 1455 : ← 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1585 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : ← 0.50 : 1650
LOW IDLE	
control lever position degree tolerance degree	: 82.0 : + 4.0
control lever position degree tolerance degree	: 17.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 6.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.40 : + 0.10
Rated speed rpm	: 350
7000UF 601700	
TORQUE CONTROL Rated speed rpm	: 1000
rack travel mm	: 12.90
Tolerance mm	: - 0.05
Rated speed rpm	: 1400
rack travel mm	: 12.90 : + 0.10
Tolerance mm	: T- U.10

ANEROID/ALTITUDE COMPENSATOR TEST
SETTING

Rated speed rpm	:	500
Pressure hPa	:	2000
rack travel mm	:	12.90
Tolerance mm	: -	

Rated speed rpm	:	500
Pressure hPa	:	-
rack travel mm	:	8.20
Tolerance mma	: +	- 0.10

MEASUREMENT

Rated	speed	rpm	:	500

Pressure hPa	:	1300
rack travel mm	:	4.20
Tolerance mm	: -	⊢ 0.20

Pressure hPa	:	430
rack travel mm	:	0.25
Tolerance mm	: +	- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa		2000
—	•	1400
Rated speed rpm	•	1400
Del. quantity		
cm3/1000 strokes	:	230.0
Tolerance		
cm3/1000 strokes	: ⊣	 3.0
Check tolerance		
cm3/1000s.	• 4	- 5.0
Spreed	•	3.0
Tolerance		
		40.0
cm3/1000 strokes	:	10.0
Check tolerance		
cm3/1000s.	:	14.0
CMD/ TUDUS.	•	14.0

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	84.0
Tolerance		
cm3/1000 strokes	: +-	1.0
Check tolerance		
cm3/1000s.	: +-	4.0

LOW IDLE

Rated speed rpm	:		300
Rack travel in mma Tolerance mma Del. quantity	-	+	5.40 0.10
cm3/1000 strokes	:		23.0
Tolerance cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000S. Spreed	:	+-	5.0
Tolerance cm3/1000 strokes	:		5.0
Check tolerance cm3/1909s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 12.02.98 Edition ISO 4113 Test oil

Combination No. : 0 402 646 657

Injection pump

Pump designation : PE6P130A320RS7368 EP type number : 0 412 636 836

Governor

Governer design. : RQV250...1125PA1210K

Governer no. : 0 421 815 460

Cust. part No. : 866737-P05 v. 06.96

Customer-spec. information Customer : PENTA : TAMD 122 P Motor

Power KW : 426.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration

damper

(RoBo diaphragm) : 4.1

Test oil inlet

temp. °C : 4
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 . bar

Tolerance bar : \leftarrow 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm: 7.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1125	guide sleeve travel mm : 6.36 Tolerance mm : + 0.25
Rack travel in mm: 11.40 Tolerance mm: : +- 0.05	Rated speed rpm : 275 guide sleeve travel mm : 2.04
Del. quantity cm3/1000 strokes : 313.0	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.5	Rated speed rpm : 325 guide sleeve travel mm : 2.73 Tolerance mm : + 0.25
Check tolerance cm3/1000s. : + 5.0	Rated speed rpm : 430
Spreed	guide sleeve travel mm : 3.61 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : 9.0	Rated speed rpm : 1420 guide sleeve
Check tolerance cm3/100Gs. : 13.0	travel mm : 13.50 Tolerance mm : + 0.50
Ratted speed rpm : 260	GUIDE SLEEVE POSITION
Rack travel in mm: 4.70 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 20.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance	control lever position degree : - 1 Rated speed rpm : 1284 Rack travel in mm : 10.50 Tolerance mm : + 2.00
cm3/1000s. : + 6.0 Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 7.0 + Check tolerance cm3/1000s. : 11.0 + Check tolerance cm3/1000s.	Rated speed rpm : 1125 Aneroid pressure hPa : 2000
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Del. quantity cm3/1000 strokes : 313.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 5.0 Spreed Tolerance
Rated speed rpm : 1176 guide sleeve travel mm : 10.15 Tolerance mm : + 0.25	cm3/1000 strokes : 9.0 Check tolerance cm3/1000s. : 13.0
Rated speed rpm : 260 guide sleeve travel mm : 1.69	CONTROL LEVER
Tolerance mm : + 0.25 Rated speed rpm : 782	control lever position degree : 64.0 tolerance degree : +- 4.0

control lever position degree tolerance degree	: 118.0 : ← 4.0
RATED SPEED rack travel mon Rated speed rpm Tolerance 1/min	: 10.40 : 1165 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 1245
rack travel mma Tolerance mma Rated speed rpm	: 0.50 : + 0.50 : 1300
LOW IDLE	
control lever position degree tolerance degree	: 71.0 : + 4.0
control lever position degree tolerance degree	: 18.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 5.90
Testing:	
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 260 : 4.70 : + 0.10 : 330
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1125 : 11.40 : + 0.05
Rated speed rpm rack travel mma Tolerance mma	: 700 : 10.30 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	: 500 : 9.50 : + 0.15

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1125
Pressure hPa : 2000
rack travel mm : 11.40
Tolerance mm : + 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 7.00
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 1125

Pressure hPa : 1200 rack travel mm : 3.90 Tolerance mm : + 0.20

Pressure hPa : 150 rack travel mm : 0.25 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure 2000 Rated speed rpm 700 Del. quantity cm3/1000 strokes : 301.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance 14.0 cm3/1000s.

Aneroid pressure
hPa : 2000
Rated speed rpm : 500
rack travel mm : 9.50
Tolerance mm : + 0.15
Del. quantity
cm3/1000 strokes : 280.0
Tolerance
cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. 6.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s.5.0 STARTING FUEL DELIVERY Rated speed rpm 100 7.00 rack travel mm : **←** 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 80.0 Tolerance cm3/1000 strokes : \leftarrow 15.0 Check tolerance cm3/1000s. : + 20.0LOW IDLE Rated speed rpm : 260 4.70 Rack travel in mm: Tolerance mm 0.10 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. 11.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.02.98 Edition Test oil : ISO 4113

Combination No. : 0 402 646 850

Injection pump

Cust. part No.

Pump designation : PE6P130A720RS7140 EP type number : 0 412 636 830

Governor

Governer design. : RQV250...900PA869 : 0 421 813 634 Governer no.

: 849441 PO?

Customer-spec. information : PENTA Customer : TID 162 AP Motor : 357.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temo. °C Tolerance °C

: 2 417 413 077 Overflow valve

Inlet press. bar : 1.5 : + 0.1 Tolerance bar

Overflow quantity

min. L/h Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter:

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.65 : + 0.05Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.30 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Barrel no.

BASIC SETTING

Rated speed rpm : 700

10.30 Rack travel in mm: Tolerance mm : +- 0.05

	∔ guide sleeve
Del. quantity cm3/1000 strokes : 293.0	travel mm : 4.70 Tolerance mm : + 0.30
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 985 guide sleeve travel mm : 8.30
Check tolerance cm3/1000s. : + 5.0	Tolerance mm : + 0.20
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 6.0	control lever position degree : - 1
Check tolerance cm3/1000S. 9.0	Rated speed rpm : 980
	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rarted speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 3.80	
Tolerance mm : +- 0.10 Del. quantity	Rated speed rpm : 700 Aneroid pressure
cm3/1000 strokes : 20.0 Tolerance	hPa : - Del. quantity
cm3/1000 strokes : +- 3.0 Check tolerance	cm3/1000 strokes : 293.J
cm3/1000s. : +- 6.0	cm3/1000 strokes : + 1.0 Check tolerance
Tolerance	- cm3/1000s. : +- 5.0
cm3/1900 strokes : 5.0 Check tolerance	+ Spreed + Tolerance
cm3/1000s. : 8.0	cm3/1000 strokes : 6.0 Check tolerance
(D) CETTAK OF TALLECTY ON DUMP	- cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
GUIDE SLEEVE TRAVEL	CONTROL LEVER
	control lever
Rated speed rpm : 925	position degree : 59.0
guide sleeve	tolerance degree : + 4.0
travel mm : 7.40	†
Tolerance mm : +- 0.10	control lever position degree : 115.0
Rated speed rpm : 250 guide sleeve	tolerance degree : +- 4.0
travel mm : 1.10	RATED SPEED
Tolerance mm : + 0.20	rack travel mm : 9.30 Rated speed rpm : 925
Rated speed rpm : 350 guide sleeve	Tolerance 1/min : +- 5
travel mm : 2.30	rack travel mm : 4.00
Tolerance mm : + 0.30	Rated speed rpm : 985 Tolerance 1/min : +- 15
Rated speed rpm : 700	rack travel mm : 0.50
	1 . aut at at a c inni

Toterance nm : **←** 0.50 Rated speed rpm : 1100

LOW IDLE

control lever

67.0 position degree : tolerance degree : + 4.0

control lever

position degree : 10.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm 100

CRT mm min. : > 5.30

Testing:

250 Rated speed rpm 3.80 rack travel mm Tolerance mm : + 0.10

305 Rated speed rpm :

TURQUE CONTROL

Rated speed rpm : 700 10.30 rack travel mm Tolerance mm : **←** 0.05

STARTING FUEL DELIVERY

Rated speed rpm 100 10.30 rack travel mm Del. quantity

cm3/1000 strokes : 240.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

LOW IDLE

250 Rated speed rpm :

Rack travel in mm: 3.80 Tolerance max : + 0.10 Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. ; +-6.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 16.02.98 Test oil : ISO 4113

Combination No. : 0 402 646 967

Injection pump

Pump designation : PE6P130A720RS7150

: -10

EP type number : 0 412 636 831

6overnor

6overner design. : RQV250...900PA881-1

Governer no. : 0 421 813 982

Cust. part No. : 864988-P05 v.09.97

Customer—spec. information Customer : PENTA

Customer : PENTA Motor : TAMD 162 C,AX

Power KW : 375.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 9.40 Tolerance mm: : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance 'NW : + 0.75

Start of delivery mark

Tolerance $: \leftarrow 0.50$

Check

tolerance *NW : +- 0.75

Barrel no. : 1

	Tolerance nm : +- 0.20
BASIC SETTING	- - Rated speed rpm : 350 - guide sleeve
Rated speed rpm : 700	travel mm : 2.30 Tolerance mm : + 0.30
Rack travel in mm: 11.60 + Tolerance mm: + 0.05 +	- - Rated speed rpm : 700 - guide sleeve
Del. quantity cm3/1000 strokes : 336.0	travel mm : 4.80 Tolerance mm : + 0.30
Tolerance	- Rated speed rpm : 985 - guide sleeve
cm3/1000 strokes : + 1.5 Check tolerance	travel mm : 8.60 Tolerance mm : +- 0.20
cm3/1000s. : + 5.0	GUIDE SLEEVE POSITION
Spreed	• •
Tolerance cm3/1000 strokes : 6.0	- control lever - position degree : — 1 - Rated speed rpm : 980
Check tolerance cm3/1000s. : 10.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.20 Tolerance mm: +- 0.10 Del. quantity cm3/1000 strokes: 19.5	Rated speed rpm : 700 Anaroid pressure hPa : 1000 Del. quantity
Tolerance cm3/1000 strokes : + 2.5	cm3/1000 strokes : 336.0 Tolerance
Check tolerance cm3/1000s. : + 5.0 Spreed	cm3/1000 strokes : +- 1.5 Check tolerance cm3/1000s. : +- 5.0
Tolerance cm3/1000 strokes : 5.0	Spr ee d Tol erance
Check tolerance cm3/1000s. : 8.0	- cm3/1000 strokes : 6.0 - Sheck tolerance - cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP	-
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	- control lever - position degree : 118.0
Rated speed rpm : 925 guide sleeve	tolerance degree : +- 4.0
travel mm : 7.70 Tolerance mm : + 0.10	RATED SPEED rack travel mm : 10.60 Rated speed rpm : 930
Rated speed rpm : 250 guide sleeve	Tolerance 1/min : +- 5
travel mm : 1.10	rack travel mm : 4.00

Rated speed rpm : 1000 Tolerance 1/min : + 15

 $\begin{array}{lll} \text{rack travel mm} & : & 0.50 \\ \text{Tolerance mm} & : & \leftarrow 0.50 \\ \text{Rated speed rpm} & : & 1100 \\ \end{array}$

LOW IDLE

control lever

position degree : 67.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 150

CRT mm min. : > 6.00

Testing:

Rated speed rpm : 250 rack travel mm : 4.20 : + 0.10Tolerance mm

Rated speed rpm : 300

TORQUE CONTROL

TORGUE CUNTROL

Rated speed rpm : 700

11.60 rack travel mm : 11.60
Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : rack travel mm : 1000 11.60 : +- 0.05 Tolerance mm

Rated speed rpm : 500 Pressure hPa 9.40 rack travel mm : Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 400 rack travel mm : 9.80 Tolerance mm : **←** 0.20

Pressure hPa : 680 rack travel mm : 11.30 Tolerance mm : \leftarrow 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 228.0

Tolerance

cm3/1000 strokes : \leftarrow 1.5 Check tolerance

: +- 5.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 250

Rack travel in mm: 4.20 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 19.5

Tolerance cm3/1000 strokes : \leftarrow 2.5

Check tolerance cm3/1000s. : +-5.0

Spreed Tolerance

5.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 13.02.98 Test oil : ISO 4113

Combination No. : 0 402 666 803

Injection pump

Pump designation : PE6P120A320/3Ls7883

EP type number : 0 412 626 938

Governor

Governer design. : RSV600...1050P0A592

Governer no. : 0 421 833 458

Cust. part No. : 0220743802

Customer—spec. information Customer : MB-NFZ Motor : OM 401 LA Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 120 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.3 Tolerance bar : + 1.0

Prestroke mm : 5.25
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50Tolerance mm : +- 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : C-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mmm : 13.30 Tolerance mmm : + 0.05

4	Aneroid pressure
Del. quantity cm3/1000 strokes : 232.0	hPa : - Del. quantity
Tolerance	cm3/1000 strokes : 232.0
cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000S. : +- 4.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 6.0
+	Check tolerance
Tolerance cm3/1000 strokes : 6.0	cm3/1000s. : 9.0
Check tolerance	
cm3/1000s. : 9.0	CONTROL LEVER
	control lever
†	position degree : 88.0
Rated speed rpm : 600	tolerance degree : +- 4.0
Rack travel in mm: 3.80	
Tolerance mm : + 0.10	
Del. quantity	
cm3/1000 strokes : 13.0	
Tolerance	LOW TOLE
cm3/1000 strokes : + 3.0 +	
Check tolerance	
cm3/1000s. : + 6.0	control lever
Spreed	position degree : 74.0
Tolerance	tolerance degree : +- 4.0
cm3/1000 strokes : 8.0	8.4.0
Check tolerance	Setting point w/out bumper spring
cm3/1000s. : 12.0	Rated speed rpm : 100
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CRT mm min. : > 19.50
WITH GOVERNOR	Testing:
	Rated speed rpm : 600
GUIDE SLEEVE POSITION	rack travel mm : 3.80
+	Tolerance mm : 4- 0.10
+	
control lever	rack travel mm : 2.00
position degree : -3	Rated speed rpm : 630
Rated speed rpm : 800	Tolerance 1/min : + 30
Rack travel in mm: 0.50 + Tolerance mm : + 0.20 +	SET IDLE AUXILIARY SPRING
Totalice law	rack travel mm : 2.00
governor spring	THE CTUVE CHART . 2.00
pre-tension +	
click setting x : 1.00	TORQUE CONTROL
<u> </u>	Rated speed rpm : 1030
	rack travel mm : 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.05
Rated speed rpm : 1030	Rated speed rpm : 700
F17	

rack travel non : 13.30 Tolerance non : + 0.10

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa 700 Rated speed rpm Del. quantity cm3/1000 strokes : 234.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0

12.0

STARTING FUEL DELIVERY

Check tolerance cm3/1000s.

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 250.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

600 Rated speed rpm 3.80 Rack travel in mm: Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance 12.0 cm3/1000S.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 13.03.97

Test oil : ISO 4113

Combination No. : 0 402 846 C61

Injection pump

Pump designation : PE6P120A320RS8024-1

EP type number : 0 412 826 029

Governor

Governer design. : RQVZ50...1100PA1072

: --3K

Governer no.

: 0 421 815 979

Cust. part No. : 477950-P05 v. 11.95

Customer-spec. information

Customer : VOLVO-TRUCK

Motor

: TD74 EU

Power KW

: 169.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve

: 2 417 413 089

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter:

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm

: + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 7.20

: + 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

-300

Tolerance : ← 0.30

Check

tolerance *NW

: + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.40

Tolerance mm

: + 0.05

Del. quantity

cm3/1000 strokes : 175.0

Tolerance	- guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 2.97
	- Tolerance mm : +- 0.25
Check tolerance	
cm3/1000s. : +- 4.0	Rated speed rpm : 390
1,100	guide sleeve
Spreed	travel mm : 3.22
spreed	
7.1	Tolerance mm : + 0.25
Tolerance	
cm3/1000 strokes : 8.0	- Rated speed rpm : 1390
	guide sleeve
Check tolerance	travel mm : 13.50
cm3/1000s. : 11.0	Tolerance mm : +- 0.50
	GUIDE SLEEVE POSITION
Rated speed rpm : 300	
Hated opera i pin	
Rack travel in mm : 4.40	control lever
Tolerance mm : + 0.10	position degree : - 1
Del. quantity	- Rated speed rpm : 1290
cm3/1000 strokes : 23.0	
Tolerance	- Rack travel in mm : 7.50
cm3/1000 strokes : + 2.5	- Tolerance mm : +- 2.50
Check tolerance	
cm3/1000s. : + 5.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	- ACE END RESTRENT HI LOWE END OLD
cm3/1000 strokes : 5.0	- Rated speed rpm : 1100
Check tolerance	- Aneroid pressure
cm3/1000s. : 8.0	- hPa : 1500
	- Del. quantity
· .	- cm3/1000 strokes : 175.0
(B) SETTING OF INJECTION PUMP	- Tolerance
WITH GOVERNOR	- cm3/1000 strokes : $+$ 1.0
4	- Check tolerance
	- cm3/1000s. : + 4.0
GUIDE SLEEVE TRAVEL	- Spreed
TOUR OFFICE THAT ELECTRICATE TO A SECOND FOR THE PROPERTY OF T	- Tolerance
Rated speed rpm : 1176	- cm3/1000 strokes : 8.0
	- Check tolerance
guide sleeve	
travel mm : 10.15	- cm3/1000s. : 11.0
Tolerance mm : + 0.25	•
1	•
Rated speed rpm : 250	
guide sleeve	- CONTROL LEVER
travel mm : 1.33	-
Tolerance mm : + 0.25	- control lever
	- position degree : 72.0
Rated speed rpm : 733	- tolerance degree : +- 4.0
guide sleeve	- The state of the
travel mm : 5.39	- control lever
Tolerance mm : +- 0.25	position degree : 118.0
1	tolerance degree : + 4.0
Rated speed rpm : 307	•
guide sleeve	- RATED SPEED
travel mm : 2.29	- rack travel mm : 10.40
Tolerance mm : + 0.25	- Rated speed rpm : 1135
	- Tolerance 1/min : + 5
Rated speed rpm : 357	·
······································	

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: 1210 : + 15
LOW IDLE	
control lever position degree tolerance degree	: 65.0 : + 4.0
control lever position degree tolerance degree	: 19.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
CRī mm min.	: > 6.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.40 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.40 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 9.10 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 300 : 8.30 : ← 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm	: 1100 : 1500 : 11.40

Tolerance mm	
IOCCIONICE IMA	: ← 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : - : 7.20 : + 0.10
MEASUREMENT	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 580 : 3.50 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 120 : 0.25 : ← 0.05
FUEL DELIVERY CHAI	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 650
Del. quantity cm3/1000 strokes	: 159.0
Tolerance cm3/1000 strokes	: + 2.0
Check tolerance cm3/1000s. Spreed	: ← 5.0
Tolerance cm3/1000 strokes	: 10.0
Check tolerance cm3/1000s.	: 14.0
	. 9 70
rack travel mm Tolerance mm	: 8.30 : + 0.30
Aneroid pressure	**************************************
hPa Rated speed rpm	: – : 650
Del. quantity cm3/1000 strokes	: 114.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance	
cm3/1000s.	: +- 4.0

Rated speed rpm	:		300
Rack travel in mm	:		4.40
Tolerance m	:	+	0.10
Del. quantity cm3/3000 strokes	:		23.0
Tolerance			
cm3/1000 strokes	:	+	2.5
Check tolerance			
cm3/1006s.	:	+	5.0
Spreed			
Tolerance			
cm3/1000 strokes	:		5.0
Check tolerance			
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 13.03.97 Test oil : ISO 4113

Combination No. : 0 402 846 062

Injection pump

Pump designation : PE6P120A320R88024-1

EP type number : 0 412 826 029

Governor

Governer design. : RQV250...1100PA1072

: -¼K

Governer no. : 0 421 815 978

Cust. part No. : 477951-P05 v. 11.95

Customer-spec. information

Customer : VOLVO-TRUCK
Motor : TD74 EU

Power KW : 191.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 089

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 7.60 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.50 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 189.0

Tolerance	+ guide sleeve
cm3/1000 strokes : $+$ 1.0	+ travel mm : 2.97
	+ Tolerance mm : + 0.25
Check tolerance	1
cm3/1000s. : +- 4.0	Rated speed rpm : 390
CM3/10003 ! - 4.0	
	+ guide sleeve
Spreed	travel mm : 3.22
	Tolerance mm : +- 0.25
Tolerance	+
cm3/1000 strokes : 8.0	+ Rated speed rpm : 1390
	+ guide sleeve
Check tolerance	+ travel mm : 13.50
cm3/1000s. : 11.0	+ Tolerance mm : + 0.50
11.0	Total differential . 0.50
	Ť
	+ GUIDE SLEEVE POSITION
Rated speed rpm : 300	†
	+
Rack travel in mm : 4.80	+ control lever
Tolerance mm : + 0.10	+ position degree : -1
Del. quantity	+ Rated speed rpm : 1290
cm3/1000 strokes : 23.0	
Tolerance	Rack travel in mm: 7.50
cm3/1000 strokes : +- 2.5	
	+ Tolerance mm : + 2.50
Check tolerance	†
cm3/1000s. : +- 5.0	
Spreed	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	+
cm3/1000 strokes : 5.0	+ Rated speed rpm : 1100
Check tolerance	+ Aneroid pressure
cm3/1000s. : 8.0	+ hPa : 1500
	+ Del. quantity
	+ cm3/1000 strokes : 189.0
(B) SETTING OF INJECTION PUMP	+ Tolerance
WITH GOVERNOR	- cm3/1000 strokes : + 1.0
MILL GOACKIANK	The state of the s
	+ Check tolerance
	+ cm3/1000s. + 4.0
GUIDE SLEEVE TRAVEL	+ Spreed
	+ Tolerance
Rated speed rpm : 1176	+ cm3/1000 strokes : 8.0
guide sleeve	+ Check tolerance
travel mm : 10.15	+ cm3/1000s. : 11.0
Toleranse mm : + 0.25	
The section for the section of the s	1
Rated speed rpm : 250	1
	CONTROL LEVER
guide sleeve	T CONTROL LEVER
travel mm : 1.33	†
Tolerance mm : + 0.25	+ control lever
	+ position degree : 66.0
Rated speed rpm : 733	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 5.39	+ control lever
Tolerance mm : + 0.25	+ position degree : 119.0
	+ tolerance degree : +- 4.0
Rated speed rpm : 307	L cocci antic degree . 4.0
guide sleeve	RATED SPEED
Saide Steele	
travel mm : 2.29	rack travel mm : 11.50
Tolerance mm : + 0.25	+ Rated speed rpm : 1135
	+ Tolerance 1/min : + 5
Rated speed rpm : 357	+

rack travel mon Rated speed rpm Tolerance 1/min rack travel mon Tolerance mon Rated speed rpm	: 0.50
LOW IDLE	
control lever position degree tolerance degree	: 72.0 : + 4.0
control lever position degree tolerance degree	: 19.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
CRT maa min.	: > 6.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.80 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.50 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.30 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 300 : 10.50 : + 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm	: 1100 : 1500 : 12.50

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : - : 7.75 : + 0.10
	4400
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 750 : 4.20 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 200 : 0.25 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 225.0 : + 2.5 : + 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: : 650 : 115.0 : + 1.0 : + 4.0
LOW IDLE	

Tolerance mm : + 0.10

F25

Rated speed rpm	:		30 0
Rack travel in mm Tolerance mm Del. quantity	:	+ -	4.80 0.10
cm3/1000 strokes Tolerance	:		23.0
cm3/1000 strokes Check tolerance	:	+	2.5
cm3/1000s.	:	+	5.0
Tolerance cm3/1000 strokes Check tolerance	:		5.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 17.02.98

Test oil

: ISO 4113

Combination No.

: 0 402 846 064

Injection pump

Pump designation : PESP120A320RS8030 EP type number : 0 412 826 030

Governor

Governer design. : RQV300...1100PA1017

: -2

Governer no.

: 0 421 814 102

Cust. part No. : 3825157-P04 v.05.96

Customer-spec. information

Customer

: PENTA

Motor

: TWD 1230 E

Power KW

: 275.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

Tolerance bar : + 0.1

Overflow quantity

min. l/h : 150 Tolerance l/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

F27

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm

: 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : + 1.0

Prestroke mm 4.15

Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 8.10

: **←** 0.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm :

700

ا	L
Rack travel in mm: 11.90	Rated speed rpm : 385
Tolerance no : + 0.05	guide sleeve
	travel mm : 1.98
Del. quantity	Tolerance mm : + 0.25
cm3/1000 strokes : 277.0	-
·	Rated speed rpm : 435
Tolerance	- guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 2.45
	- Tolerance mm : +- 0.25
Check tolerance	-
cm3/1000s. : +- 4.0	Rated speed rpm : 530
	guide sleeve
Spreed	travel mm : 3.11
<u> </u>	Tolerance mm : + 0.25
Tolerance	4/00
cm3/1000 strokes : 8.0 -	- Rated speed rpm : 1400
Charle de Langue	guide sleeve
Check tolerance - 11.0	travel mm : 11.50 Tolerance mm : +- 0.50
CB3/10003 11.0	- Toterance and 0.50
	GUIDE SLEEVE POSITION
Rated speed rpm : 325	L
(1200a opoda 1 pm)	<u></u>
Rack travel in mm: 4.60	- control lever
Tolerance mm : + 0.10	- position degree : - 1
Del. quantity	Rated speed rpm : 1250
cm3/1000 strokes : 20.0	-
Tolerance	- Rack travel in mm: 9.00
cm3/1000 strokes : +- 2.5	Tolerance mm : +- 3.00
Check tolerance	
cm3/1000s. : +- 5.0 -	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance - cm3/1000 strokes : 5.0	Pated and done
	Rated speed rpm : 700
Check tolerance - 8.0 -	- Aneroid pressure - hPa : 1800
CMS/10005 0.0	- hPa : 1800 - Del. quantity
	cm3/1000 strokes : 277.0
(B) SETTING OF INJECTION PUMP	- Tolerance
WITH GOVERNOR	- cm3/1000 strokes : +- 1.0
W2111 0012/2/01(- Check tolerance
	- cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL	- Spreed
1	- Tolerance
Rated speed rpm : 1182	- cm3/1000 strokes : 8.0
guide sleeve	- Check tolerance
travel mm : 8.71	- cm3/1000s. : 11.0
Tolerance mm : + 0.25	+
705	-
Rated speed rpm : 325	CONTROL LEVER
guide sleeve	- CONTROL LEVER
+mayot - 1/1	
travel mm : 1.41	-
travel mm : 1.41 - Tolerance mm : + 0.25 -	control lever
Tolerance mm : + 0.25	- control lever - position degree : 46.0
Tolerance mm : + 0.25 Rated speed rpm : 834	control lever
Tolerance mm : + 0.25 Rated speed rpm : 834 guide sleeve	control lever position degree : 46.0 tolerance degree : + 4.0
Tolerance mm : + 0.25 Rated speed rpm : 834 guide sleeve	- control lever - position degree : 46.0

RATED SPEED rack travel mm : 10.90 Rated speed rpm : 1080 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1190 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300	Rated speed rpm : 500 Pressure hPa : - rack travel mm : 8.10 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 1080 rack travel mm : 3.50 Tolerance mm : + 0.20 Pressure hPa : 350 rack travel mm : 0.25 Tolerance mm : + 0.05
LOW IDLE	‡
control lever	FUEL DELIVERY CHARACTERISTICS
position degree : 82.0 tolerance degree : +- 4.0	Aneroid pressure
control lever position degree : 12.0 tolerance degree : + 4.0	Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 165.0
Setting point w/out bumper spring	Tolerance cm3/1000 strokes : + 1.0
Rarted speed rpm : 225	+ Check tolerance + cm3/1000s. : ← 4.0
CRT mm min. :> 7.20	+
Testing:	STARTING FUEL DELIVERY
Rated speed rpm : 325 rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 360	Rated speed rpm : 100 rack travel mm : 8.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 120.0 Tolerance
TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.90 Tolerance mm : + 0.05	+ cm3/1000 strokes : + 21.0 + Check tolerance + cm3/1000s. : + 25.0
ANEROID/ALTITUDE COMPENSATOR TEST	LOW IDLE Rated speed rpm : 325
SETTING	Rack travel in mm: 4.60
Rated speed rpm : 500 Pressure hPa : 1800 rack travel mm : 11.90 Tolerance mm :	Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : + 2.5

Check tolerance cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.04.93 : ISO 4113

Combination No. : 0 403 446 313

Injection pump

Pump designation : PES6MW100/720RS1223 EP type number : 0 413 406 218

Governor

Governer design. : RQV325...1350MW127K

Governer no. : 0 420 083 988

Cust. part No.

Customer-spec. information

Customer : IVECO-FIAT Motor : 8060.45.6200

Power KW : 167.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

40 temp. °C Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : resc pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.05 Tolerance man : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.15 : + 0.05 Tolerance mm

Rack travel in mm: 6.00 Tolerance mm : + 0.10

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE POSITION

control lever

position degree : - 1 Rated speed rpm : 1400

Rack travel in mm: 16.50 Tolerance mm: : + 1.30

CONTROL LEVER

control lever

position degree : 124.0 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 12.00
Rated speed rpm : 1425
Tolerance 1/min : +- 5

rack travel mm : 4.00
Rated speed rpm : 1530
Tolerance 1/min : + 15

LOW IDLE

control lever

position degree : 82.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 200

CRT mm min. : > 7.50

Testing:

Rated speed rpm : 325
rack travel mm : 6.00
Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 12.15 Tolerance mm : + 0.05

Rated speed rpm : 1200 rack travel mm : 13.40 Tolerance mm : \leftarrow 0.10

Rated speed rpm : 900 rack travel mm : 12.50 Tolerance mm : +- 0.10

Rated speed rpm : 1350 rack travel mm : 13.00 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1200
Pressure hPa : 1200
rack travel mm : 13.40
Tolerance mm : + 0.10

Rated speed rpm : 1200
Pressure hPa : rack travel mm : 8.40
Tolerance mm : + 0.10

MEASUREMENT

Rated speed rpm : 1200

Pressure hPa : 800 rack travel mm : 12.00 Tolerance mm : + 0.10

Pressure hPa : 450 rack travel mm : 10.05 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1200
Rated speed rpm : 1200
Del. quantity
cm3/1000 strokes : 121.5
Tolerance
cm3/1000 strokes : + 1.5

Cm3/1000 strokes : + 1.5
Check tolerance
cm3/1000s. : + 4.0
Spreed
Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. 7.0 :

Aneroid pressure

hPa 1200 Rated speed rpm 900 rack travel mm 12.50 : + 0.10Tolerance mon

Del. quantity

cm3/1000 strokes : 117.5

Tolerance

cm3/1000 strokes : +-1.5

Check tolerance

cm3/1000s. : +- 4.0

Aneroid pressure

1200 Rated speed rpm 1350

Del. quantity

cm3/1000 strokes : 115.0

Tolerance

cm3/1000 strokes : +-1.5

Check tolerance

cm3/1000s. 4.0

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity

cm3/1000 strokes : 66.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 3.0

WARM-START DELIVERY

100 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 55.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 13.0

COLD-START DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

: + 13.0 cm3/1000s.

LOW IDLE

Rack travel in mm: 6.00

Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 18.02.98 : ISO 4113

Combination No. : 0 403 466 173

Injection pump

Pump designation : PES6MW100/120RS1241

EP type number

: 0 413 406 240

Governor

Governer design. : RSV400...950MW0A384

: -1

Governer no.

: 0 420 085 285

Cust. part No. : 3930118

Customer-spec. information

Customer

: CDC

Motor

: 6 CT

Power KW

: 145.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 417 413 047

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

208.5

Tolerance bar

: **←** 1.5

Test lines

: 1 680 750 014

Outside diameter :

6.0

606

x inside diameter: 2.0

x Length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : + 1.0

Prestroke mm 2.80

Tolerance mm

: +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order

: 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance

Check tolerance 'NW : + 0.50: **←** 0.75

Start of delivery blocking

"NW after s.o.d. : 7.50

Barrel no.

1 :

BASIC SETTING

Rated speed rpm :

950

Rack travel in mm: 12.50 Tolerance mm

: + 0.05

Del. quantity

cm3/1000 strokes :

147.0

Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 4.0	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
Check tolerance	
cm3/1000s. : 7.5	CONTROL LEVER
Rated speed rpm : 425	control lever position degree : 82.0 tolerance degree : + 4.0
Rack travel in mm: 5.60	RATED SPEED
Tolerance mm : + 0.30	rack travel mm : 11.50
Del. quaritity	Rated speed rpm : 995
cm3/1000 strokes : 22.0	Tolerance 1/min : +- 5
Tolerance +	mosts travel are
cm3/1000 strokes : + 2.0 + Check tolerance +	rack travel mm : 4.00 Rated speed rpm : 1080
cm3/1000s. ; + 4.5	Tolerance 1/min : +- 15
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : +- 0.55 Rated speed rpm : 1250
cm3/1000s. : 5.5	Naced Speed (pill : 1230
+	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1095 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
<u> </u>	
control lever	control lever
position degree : -3 Rated speed rpm : 800	position degree : 68.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Rack travel in mm : 0.65 Tolerance mm : + 0.35	Setting point w/out bumper spring
+	Rated speed rpm : 425
governor spring + pre-tension +	rack travel mm : 4.60 Tolerance mm : + 0.10
click setting x : 3.25	Toterance mm : + U.IU
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 19.50
Rated speed rpm : 950 Aneroid pressure	Testing:
hPa : 1200	Rated speed rpm : 425
Del. quantity + cm3/1000 strokes : 147.0 +	rack travel mm : 5.60
CMD/ 1000 Strokes : 147.0 +	Tolerance mm : +- 0.30

rack travel man Rated speed rpm Tolerance 1/min	: 2.00 : 505 : +- 35
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 950 : 12.50 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 12.50 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.25 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 850 : 11.60 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 680 : 10.75 : ← 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	· -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 118.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s.	: ← 4.0

rack travel mm	-		20.00
Tolerance mm	:	+-	1.00
Del. quantity			
cm3/1000 strokes	:		170.0
Tolerance			
cm3/1000 strokes	:	+-	10.0
Check tolerance			
cm3/1000s.	:	+-	13.0

LOW IDLE

Rated speed rpm	:	425
Rack travel in mm Tolerance mm Del. quantity	: : +-	5.60 0.30
cm3/1000 strokes	:	22.0
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed Tolerance		
cm5/1000 strokes	•	3.5
Check tolerance cm3/1000S.	:	5.5

End of test specification sheet

Rated speed rpm : 100

608

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.02.98 : ISO 4113

Combination No. : 0 403 466 180

Injection pump

Pump designation : PES6MW100/120RS1238

EP type number : 0 413 406 237

Governor

Governer design. : RSV425...1150MW2A407

Governer no.

: 0 420 085 298

Cust. part No. : 3284067

Customer-spec. information Customer : CDC Motor : 6 CT

Power KW : 129.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 8.25

Barrel no. :

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 9.95 Tolerance mm : +- 0.05

Del. guantity

cm3/1000 strokes : 119.0

Tolerance +	Tolerance
cm3/1000 strokes : +- 1.0 +	cm3/1000 strokes : + 1.0
<u> </u>	Check tolerance
Check tolerance +	cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	Spreed
1	Tolerance
Spreed	cm3/1000 strokes : 4.0
1	Check tolerance
Tolerance	cm3/1000s. : 7.5
cm3/1000 strokes : 4.0	CIID7 (0003 1.5
tims/1000 strokes . 4.0	
Check tolerance	
	CONTROL LEVED
cm3/1000s. : 7.5	CONTROL LEVER
†	control lever
· †	position degree : 109.0
Rated speed rpm : 440 +	tolerance degree : +- 4.0
†	
Rack travel in mm: 5.25	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 8.95
Del. quantity +	Rated speed rpm : 1225
cm3/1000 strokes : 24.5	Tolerance 1/min : +- 5
Tolerance +	
cm3/1000 strokes : + 2.0 +	rack travel mm : 4.00
Check tolerance +	Rated speed rpm : 1300
cm3/1000s. : ← 4.5	Tolerance 1/min : +- 5
Spreed	
Tolerance	rack travel mm : 1.00
cm3/1000 strokes : 3.5	Tolerance mm : +- 0.70
Check tolerance	Rated speed rpm : 1400
cm3/1000s. : 5.5	
	rack travel mm : 4.00
	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : + 15
WITH GOVERNOR	roterance main
WITH GOALWON	
I	
GUIDE SLEEVE POSITION	LOW IDLE
dotte steeve rostitor	FOM INTE
Ť	
control lever	control lover
runtral lever	control lever
position degree : -3	position degree : 87.0
Rated speed rpm : 800	tolerance degree : + 4.0
Park drawal draws : 0.45	Cabbin maint which homes and
Rack travel in mm: 0.65 +	Setting point w/out bumper spring
Tolerance mm : + 0.35	0-1-1
. +	Rated speed rpm : 440
governor spring +	rack travel mm : 4.75
pre-tension +	Tolerance mm : +- 0.10
click setting x : 4.25	
+	Rated speed rpm : 100
	
FULL LOAD DELIVERY AT FULL LOAD STOP +	CRT mm min. :> 19.00
+	
Rated speed rpm : 1150 +	Testing:
Aneroid pressure +	•
hPa : 900 +	Rated speed rpm : 440
Del. quantity	rack travel mm : 5.25
cm3/1000 strokes : 119.0 +	Tolerance mm : + 0.10

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1150 : 9.95 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 10.20 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 10.30 : + 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.10 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 550 : 10.25 : ← 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 900 : 750
Del. quantity cm3/1000 strokes	: 123.0
Tolerance cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000s. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 9.0
Aneroid pressure	
hPa Rated speed rpm	: 500

Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		115.5 1.0 3.0	
STARTING FUEL DEL	IVERY		
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: +-		
Check tolerance cm3/1000s.	: +-	13.0	
LOW IDLE			
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: : +- :	440 5.25 0.10 24.5 2.0 4.5 3.5 5.5	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 19.02.98 Test oil : ISO 4113

Combination No. : 9 400 087 437

Injection bump

Pump designation : PE6P110A320RS3108Y EP type number : 0 411 816 729

Governor

Governer design. : RQV250...1100PA589

: -3

Governer no. : 9 420 080 288

Cust. part No. :

Customer-spec. information

Customer : VOLVO-TRUCK
Motor : THD 100 EC
Power KW : 180.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.15 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 139.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : \leftarrow 4.0

Spreed

Tolerance - cm3/1000 strokes : 4.0 -	control lever position degree : - 1
Check tolerance - cm3/1000s. : 7.5 -	Rated speed rpm : 1175
	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.30	
Tolerance mm : + 0.10	Rated speed rpm : 700
Del. quantity -	Aneroid pressure
cm3/1000 strokes : 32.0 -	hPa : 900
Tolerance -	
	Del. quantity
cm3/1000 strokes : + 2.5	cm3/1000 strokes : 139.0
Check tolerance	Tolerance
cm3/1000s. : +- 5.0 -	cm3/1000 strokes : + 1.0
Spreed -	Check tolerance
Tolerance -	- cm3/1000s. : +- 4.0
cm3/1000 strokes : 4.5 -	- Spreed
Check tolerance -	Tolerance
cm3/1000s. : 7.5	cm3/1000 strokes : 4.0
-	Check tolerance
-	cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP -	
WITH GOVERNOR -	
Wall, 6016101	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	CONTROL CEVER
GOINE SEELAE LIMACE	control lever
Date of accord and a OFO	
Rated speed rpm : 950 -	position degree : 65.0
guide sleeve -	tolerance degree : +- 4.0
travel mm : 6.50 -	†
Tolerance mm : + 0.20 -	control lever
	position degree : 119.0
Rated speed rpm : 250 -	tolerance degree : + 4.0
guide sleeve -	-
travel mm : 1.20 -	RATED SPEED
Tolerance mm : +- 0.10 -	rack travel mm : 10.10
•	Rated speed rpm : 1165
Rated speed rpm : 500 -	Tolerance 1/min : + 5
guide sleeve	
travel mm : 4.50 -	rack travel mm : 4.00
Tolerance mm : + 0.40 -	Rated speed rpm : 1240
	Tolerance 1/min : + 15
Rated speed rpm : 700	
guide sleeve -	rack travel mm : 0.50
travel mm : 6.50	Tolerance mm : +- 0.50
Tolerance mm : + 0.20	Rated speed rpm : 1350
Parks I seemed as a 4400	
Rated speed rpm : 1100	
guide sleeve	†
travel mm : 7.25	
Tolerance mm : + 0.25	- LOW IDLE
-	
	}
GUIDE SLEEVE POSITION -	control lever
	position degree : 64.0
-	tolerance degree : + 4.0
	r en en en en en en en en en en en en en

control lever position degree : 12.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rom 100 CRT mm min. : > 6.70 Testing: Rated speed rpm 250 rack travel mm 5.30 Tolerance mm : + 0.10Rated speed rpm : 338 TORQUE CONTROL Rated speed rpm 700 rack travel mm 11.15 Tolerance mm : **←** 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 900 rack travel mm 11.15 : + 0.05Tolerance mm Rated speed rpm 500 Pressure hPa **MEASUREMENT** Rated speed rpm : 500 430 Pressure hPa : rack travel mm 1.20

Del. quantity cm3/1000 strokes : 107.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. : +-4.0 STARTING FUEL DELIVERY Rated speed rpm 100 20.50 rack travel mm : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 170.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance cm3/1000s. : +- 14.0 LOW IDLE Rated speed rpm : 250 Rack travel in mm: 5.30 Tolerance mm : + 0.10Del. quantity cm3/1000 strokes : 32.0 Tolerance cm3/1000 strokes : +- 2.5 Check tolerance cm3/1000s. : +--5.0 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. 7.5

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

: + 0.10

: + 0.05

280

0.25

Aneroid pressure

Tolerance mm

Pressure hPa rack travel mm

Tolerance mm

hPa : -Rated speed rpm : 700

G14

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.02.98 Test oil : ISO 4113

Combination No. : 0 400 466 090

Injection pump

Pump designation : PES6A75D410/3RS1326

EP type number : 0 410 476 977

Governor

Governer design. : RSV325...1400A8C495L

Governer no. : 0 420 232 302

Cust. part No. :

Customer-spec. information

Customer : KHD
Motor : F6L912

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 1.95

Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 10.25

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 44.0

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance

cm3/1000s. : + 2.0

Spreed

Tolerance

cm3/1000 strokes : 2.0

	 		
Check tolerance	, ₋ †	CONTROL LEUED	
cm3/1000s. : 3	$\frac{1}{1}$	CONTROL LEVER	
*	I	control lever	
	1	position degree	: 118.0
Rated speed rpm : 325	; 	tolerance degree	
	+		
Rack travel in mm : 8.		RATED SPEED	0.00
Tolerance $m : \leftarrow 0$.	10 †	rack travel mm	· · · · · · · · · · · · · · · · · · ·
Del. quantity cm3/1000 strokes : 11	.0 I	Rated speed rpm Tolerance 1/min	
Tolerance	. I	toter diffe thinti	3
	i.o 1	rack travel mm	: 4.00
Check tolerance	+	Raced speed rpm	
	.5 +	Tolerance 1/min	: +- 15
Spreed	†	1 . 4 1	4.00
Tolerance cm3/1000 strokes : 2	‡	rack travel mm Tolerance mm	: 1.00 : + 0.70
Check tolerance	I	Rated speed apm	
	i.o 1	Mucca opeca i pii	. 1013
	1	rack travel mm	: 4.00
	+	Rated speed rpm	: 1550
(B) SETTING OF INJECTION P	UMP +	Tolerance 1/min	: - 15
WITH GOVERNOR	†		
	Ī		
**************************************	I		
GUIDE SLEEVE POSITION	+	LOW IDLE	
	+		
and I lave	†		
control lever position degree : - 3	†	control lever	. 71.0
Rated speed rpm : 800	ı I	position degree tolerance degree	
nated speed i piii	1	totorante degree	4.0
Rack travel in mm: 0.	65	Setting point w/ox	ut bumper spring
Tolerance mm : +- 0.	35 +		
	+	Rated speed rpm	: 325
governor spring	†	rack travel mm	: 9.00
<pre>pre-tension click setting x : 5.</pre>	75 I	Tolerance mm	: ← 0.10
celor seeing x	1	Rated speed rpm	: 100
	 \(\frac{1}{2}\)	species i più	
FULL LOAD DELIVERY AT FULL	LOAD STOP	CRT mm min.	: > 19.00
en tout or other dates	†		
Rated speed rpm : 1400	†	Testing:	
Aneroid pressure hPa : -		Rated speed rpm	: 325
Del. quantity	Ī	rack travel mm	: 8.50
	.0	Tolerance mm	: + 0.10
Tolerance	+		
	.5	rack travel mm	: 2.00
Check tolerance	†	Rated speed rpm	: 680
cm3/1000s. : +- 2 Spreed	1.0	Tolerance 1/min	: +- 30
Spreed Tolerance	T		
	.o I	TORQUE CONTROL	
	.0	TORQUE CONTROL Rated speed rpm	: 1400
cm3/1000 strokes : 2 Check tolerance	.5	Rated speed rpm rack travel mm	: 10.25
cm3/1000 strokes : 2 Check tolerance	+	Rated speed rpm	

Rated speed rpm : 500 rack travel mm : 11.55 Tolerance mm : + 0.05

Rated speed rpm : 955 rack travel mm : 10.90 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

rack travel mm : 10.90 Tolerance mm : + 0.10

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 8.50
Tolerance mm: + 0.10
Del. quantity

cm3/1000 strokes : 11.0

Tolerance

cm3/1000 strokes : + 3.0 Check tolerance

 $\frac{\text{cm3}}{1000} : + 4.5$

Spreed

Tolerance

cm3/1000 strokes : 2.0

Check tolerance

cm3/1000s. : 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 10.07.97 Edition Test oil : ISO 4113

Combination No. : 0 400 876 293

Injection pump

Pump designation : PES6A90D410RS2596 EP type number : 0 410 896 073

Governor

Governer design. : RSV350...1400A0C1141

: 0 420 232 423 Governer no.

Cust. part No. :

Customer-spec. information Customer : MB-NFZ Motor : 0M352A Fower KW : 123.0

TEST BENCH REQUIREMENTS

Inlet Line : 1.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter: 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

tolerance mm

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.05 : + 0.05Tolerance mm Check : + 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300 : **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 11.95 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 74.5

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000S.

: +- 2.5

Spreed

Tolerance +	
cm3/1000 strokes : 3.0	
+	CONTROL LEVER
Check tolerance	
cm3/1000s. : 4.5	control lever
	position degree : 114.0
†	tolerance degree : +- 4.5
Rated speed rpm : 350	RATED SPEED
Del. quantity	RATED SPEED
cm3/1000 strokes : 11.0	rack travel mm : 0.85
Tolerance	Tolerance mm : +- 0.55
cm3/1000 strokes : + 1.0	Rated speed rpm : 1680
Check tolerance +	, , ,
cm3/1000s. : + 3.0 +	rack travel mm : 4.00
Spreed +	Rated speed rpm : 1535
Tolerance + 7/4000 - + 11/4000	Tolerance 1/min : + 15
cm3/1000 strokes : 2.5	
Check tolerance + cm3/1000s. : 4.5	
CBD/ (CU)3. : 4.3	
Ĭ	LOW IDLE
(B) SETTING OF INJECTION PUMP	LOW TOLL
WITH GOVERNOR	Setting point w/out bumper spring
+	
+	Rated speed rpm : 350
+	rack travel mm : 8.10
GUIDE SLEEVE POSITION +	Tolerance mm : + 0.10
†	Data di anno di anno di 400
control lever	Rated speed rpm : 100
position degree : - 3	CRT mam main. : > 16.00
Rated speed rpm : 800	CR1 (Min W11) > 10.00
nacea speed i più	Testing:
Rack travel in mm: 0.50	
Tolerance ma : + 0.20 +	rack travel mm : 2.00
+	Rated speed rpm : 500
governor spring +	Tolerance 1/min : +- 30
pre-tension +	
click setting x : 4.00	TOROUG CONTROL
<u> </u>	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1400 rack travel mm : 11.95
TOLL COMP PETTAGES AT LOCK FOWN STOP	Tolerance mm : +- 0.05
Rated speed rpm : 1400	. Octor drine him O.O.
Aneroid pressure	Rated speed rpm : 900
hPa : 700	rack travel mm : 13.05
Del. quantity	Tolerance mm : + 0.05
cm3/1000 strokes : 74.5	
Tolerance	Rated speed rpm : 1050
cm3/1000 strokes : + 0.5	rack travel mm : 12.80
Check tolerance	Tolerance mm : +- 0.10
cm3/1000s. : +- 2.5	Pated speed page 4 1240
Spreed + Tolerance +	Rated speed rpm : 1260 rack travel mm : 11.95
cm3/1000 strokes : 3.0	Tolerance mm : + 0.05
Check tolerance	TOCOTORING IMM . T U.U.
cm3/1000s. : 4.5	
(NS/10003, 4.) T	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 700 13.15 rack travel mm : **←** 0.05 Tolerance mm

500 Rated speed rom Pressure hPa 11.35 rack travel mm : **←** 0.05 Tolerance mm

MEASUREMENT

500 Rated speed rpm

Pressure hPa 340 11.70 rack travel mm Tolerance nm : + 0.10

Pressure hPa 500 rack travel ma 12.65 Tolerance mm : **←** 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

700 hPa 900 Rated speed rpm Del. quantity cm3/1000 strokes : 76.5 Tolerance

cm3/1000 strokes : \leftarrow 1.5 Check tolerance

cm3/1000s.

4.0

12.80 rack travel mm : + 0.10Tolerance mm

Aneroid pressure

Rated speed rpm 500 Del. quantity

cm3/1000 strokes : 50.5

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance

cm3/1000s. : +-2.5

STARTING FUEL DELIVERY

Rated speed rpm 100 16.30 rack travel mm Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. : +-8.0

LOW IDLE

Rated speed rpm 350 Del. quantity cm3/1000 strokes : 11.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. 3.0 : +-Spreed Tolerance cm3/1000 strokes : 2.5 Check tolerance cm3/1000s. 4.5

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 21.02.98 Test oil : ISO 4113

Combination No. : 0 400 876 404

Injection pump

Pump designation : PES6A95D41ORS2835 EP type number : 0 410 896 896

Governor

Governer design. : RSV650...1050A8c2263

: L

Governer no. : 0 420 232 583

Cust. part No. : 87 801 602

Customer-spec. information

Customer : FNH-GEOTECH

Motor : 7.5 L Power KW : 149.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.60 Tolerence mm : + 0.05

Check

tolerance am : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 14.50 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 151.5

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

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Spreed	Tolerance cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
+	
Check tolerance cm3/1000s. : 8.0	
	CONTROL LEVER
	control lever
Rated speed rpm : 650	position degree : 92.0 tolerance degree : +- 4.0
Rack travel in mm: 5.40	
Tolerance on : + 0.10 + Del. quantity	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : 23.5	ASSEMBLI GOVERNOR SETTING
Tolerance	Rated speed rpm : 1087
cm3/1000 strokes : + 2.0	rack travel mm : 12.10
Check tolerance	
cm3/1000s. : 1- 4.5	Rated speed rom : 1117
Spreed +	Tolerance 1/min : + 5
cm3/1000 strokes : 5.5	rack travel mm : 4.00
Check tolerance	rack travel mm : 0.85
cm3/1000s. : 9.0	Tolerance ma : + 0.55
+	Rated speed rpm : 1225
(O) CETTALS OF TALLECTION DIME	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1088
WITH GOVERNOR	rack travel mm : 12.10
+	Table of divide that
+	Rated speed rpm : 1118
GUIDE SLEEVE POSITION +	Tolerance 1/min : + 5
1	rack travel mm : 4.00
control lever	rack travel man : 0.85
position degree : - 3	Tolerance mm : + 0.55
Rated speed rpm : 800	Rated speed rpm : 1225
Rack travel in mm: 0.50	
Tolerance man : + 0.20	Rated speed rpm : 1089
+	rack travel mm : 12.10
governor spring +	
pre-tension +	Rated speed rpm : 1119
click setting x : 2.25	Tolerance 1/min : +- 5 rack travel mm : 4.00
I	rack travet mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85
+	Tolerance mm : + 0.55
Rated speed rpm : 750	Rated speed rpm : 1225
Aneroid pressure	
hPa : 1200 + Del. quantity +	Rated speed rpm : 1090
cm3/1000 strokes : 151.5	rack travel mm : 12.10
Tolerance	TON CICYCL HAH . IE. IU
cm3/1000 strokes : + 1.0	Rated speed rpm : 1120
Check tolerance	Tolerance 1/min : + 5
cm3/1000s. : + 3.0 + 5	rack travel mm : 4.00
+	rack travel mm : 0.85

Tolerance mm Rated speed rpm	: + 0.55 : 1225
Rated speed rpm rack travel mm	: 1091 : 12.10
Rated speed rpm Tolerance 1/min rack travel mm	: 1121 : +- 5 : 4.00
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 1225
Rated speed rpm rack travel mm	: 1092 : 12.10
Rated speed rpm Tolerance 1/min rack travel mm	: 1122 : +- 5 : 4.00
rack travel mm Tolerance mm Rated speed rpm	: ← 0.55
LOW IDLE	and the second s
control lever position degree tolerance degree	: 74.0 : + 4.0
position degree	: + 4.0
position degree tolerance degree	: + 4.0
position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm	: + 4.0 ut bumper spring : 650 : 4.90 : + 0.10
position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm Tolerance mm	: + 4.0 ut bumper spring : 650 : 4.90 : + 0.10
position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: + 4.0 ut bumper spring : 650 : 4.90 : + 0.10 : 100
position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min.	: + 4.0 Aut bumper spring : 650 : 4.90 : + 0.10 : 100 : > 19.50 : 650
position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm	: + 4.0 ut bumper spring : 650 : 4.90 : + 0.10 : 100 : > 19.50 : 650 : 5.40 : + 0.10 : 2.00 : 700

Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.80 : ← 0.10	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.10 : + 0.10	
Rated speed rpm rack travel mm Tolerance mm	: 975 : 13.65 : + 0.15	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.50 : + 0.10	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 8.90 : + 0.10	
MEASUREMENT		
Rated speed rpm	: 500	
Pressure hPa rack travel nm Tolerance mm	: 325 : 10.70 : ← 0.20	
Pressure hPa rack travel mm Tolerance mm	: 550 : 13.55 : ← 0.05	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 77.0 : + 2.0 : + 4.5	
UND / 10000 .	• • • • • • • • • • • • • • • • • • • •	

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes :

200.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance cm3/1000s. : **←** 13.0

LOW IDLE

Rated speed rpm : 650

Rack travel in mm : 5.40 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 23.5 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s.9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 23.02.98 : ISO 4113

Combination No.

: 0 400 876 405

Injection pump

Pump designation : PES6A95D410RS2835 EP type number : 0 410 896 896

Governor

Soverner design. : RSV400...1050A202263

: -8L

Governer no.

: 0 420 232 615

Cust. part No. : 87 801 608

Customer-spec. information

: FNH-GEOTECH Customer

: 7.5 L-8640 Trak Motor

Power KW : 131.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : **←** 1.5 Tolerance bar

: 1 680 750 008 Test lines

Outside diameter : 6.0

x inside diameter : 600 x length mm :

2.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.60 Toterance in

Check

: **←** 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: ~300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.20 : +- 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s.: + 4.5

G25

	ASSEMBLY GOVERNOR SETTING	ŝ
Rated speed rpm : 450	+	207
Rack travel in mm : 5.70		093 1.20
Tolerance am : +- 0.10	T rack cravet mu .	1.20
Del. quantity		168
cm3/1000 strokes : 15.0	+ Tolerance 1/min : +-	5
Tolerance cm3/1000 strokes : +- 2.0	+ rack travel mm : 4	4.00
Check tolerance	rack travel mm : (0.85
cm3/1000s. : +- 4.5	Tolerance mm : +- (
Spreed		300
Tolerance	+	
cm3/1000 strokes : 3.5	betad and days a	207
Check tolerance cm3/1000s. 9.0		094 1.20
(T rack travel intil	1.20
	+ Rated speed rpm : 11	169
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +-	5
WITH GOVERNOR	rack travel mm : 4	4.00
	rack travel mm : (1 85
	- Tolerance mm : +- (
GUIDE SLEEVE POSITION	Rated speed rpm : 13	300
	†	
control lever	Rated speed rpm : 10	395
position degree : - 3		1.20
Rated speed rpm : 800		
0.50		170
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Tolerance 1/min : +- rack travel mm : 4	5 4.00
Toterarice Hair : - 0.20	T rack travet in :	+.00
governor spring	rack travel mm : (0.85
pre-tension	† Tolerance min : +- C	
click setting x : 3.50	Rated speed rpm : 13	300
	_	
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 10) 96
	† rack travel mm : 11	1.20
Rated speed rpm : 1050 Aneroid pressure	Detect open a 11	171
hPa : 1200		5
Del. quantity		4.00
cm3/1000 strokes : 110.0	+	
Tolerance		0.85
cm3/1000 strokes : + 2.0 Check tolerance	Tolerance mm : + 0 Rated speed rpm : 13	J.55 300
cm3/1000s. : +- 4.5	Traced observation .	,,,,,
	+	
		397
CONTROL LEVER	- + rack travel mm : 11	1.20
COLLINGE FEATIV	Rated speed rpm : 11	172
control lever	+ Tolerance 1/min : +-	5
position degree : 101.0	+ rack travel mm : 4	4.00
tolerance degree : +- 4.0	rack travel mm : (0.85
	+ Tolerance mm : +- 0	
	1	

Rated speed rpm	: 1300
Rated speed rpm rack travel mm	: 1098 : 11.20
Rated speed rpm Tolerance 1/min rack travel mm	: 1173 : ← 5 : 4.00
rack travel mm Tolerance mm Rated speed rpm	: +- 0.55
LOW IDLE	•
control lever position degree tolerance degree	: 77.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 450 : 5.20 : ← 0.10
Rated speed rpm	: 100
CRT mm min.	: > 19.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 450 : 5.70 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 600 : +- 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.20 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.10 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 925 : 13.25 : + 0.15
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 11.70 : ← 0.10

ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.10 : +- 0.10
Rated speed rpm Pressure hPa rack travel mm Toleranse mm	: 500 : - : 10.25 : + 0.05
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Folerance mm	: 500 : 11.55 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 800 : 13.55 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 750

FUEL DELIVERY CHA	RACTER	ISTICS
Aneroid pressure		200
Rated speed rpm Del. quantity	•	750
cm3/1000 strokes	:	137.5
cm3/1000 strokes Check tolerance	: +-	1.0
cm3/1000s. Spreed	: +-	3.0
Tolerance cm3/1000 strokes Check tolerance	:	3.5
cm3/1000s.	:	6.0
rack travel mm Tolerance mm	: +-	13.25 0.15
Aneroid pressure		
hPa Rated speed rpm Del. quantity	:	500
cm3/1000 strokes	:	90.0

Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 200.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 13.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm: 5.70
Tolerance mm: :+ 0.10

Del. quantity

cm3/1000 strokes : 15.0

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W4CO/...

Edition Test oil

: 23.02.98 : ISO 4113

Combination No. : 0 400 876 407

Injection pump

Pump designation : PES6A95D410RS2835 EP type number : 0 410 896 896

Governor

Governer design. : RSV650...1050A8C2263

-3

Governer no.

: 0 420 232 586

Cust. part No. : 87 801 606

Customer-spec, information Customer : NH : 7.5 L Motor Power KW : 138.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

H01

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm : 2.60 Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm: 14.00 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 141.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : ← 3.0	+ Check tolerance + cm3/1000s. : + 3.0 + Spreed
Spreed	† Tolerance
Tolerance cm3/1000 strokes : 3.5	- cm3/1000 strokes : 3.5 - Check tolerance - cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	
	+ CONTROL LEVER
Rated speed rpm : 650	<pre>control lever position degree : 91.0 tolerance degree : + 4.0</pre>
Rack travel in mm : 5.50 Tolerance mm : +- 0.10	‡
Del. quantity cm3/1000 strokes : 22.0	ASSEMBLY GOVERNOR SETTING
Tolerance	Rated speed rpm : 1092
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 11.80
$cm3/1000s.$: \leftarrow 3.5	Rated speed rpm : 1122
Spreed Tolerance	<pre>+ Tolerance 1/min : + 5 + rack travel mm : 4.00</pre>
cm3/1000 strokes : 3.5	+
Check tolerance cm3/1000s. : 5.5	+ rack travei mm : 0.85 + Tolerance mm : + 0.55
. 5.5	Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1093 rack travel mm : 11.80
GUIDE SLEEVE POSITION	+ Rated speed rpm : 1123 + Tolerance 1/min : +- 5
30000 300000 30000000000000000000000000	rack travel mm : 4.00
control lever	rack travel mm : 0.85
position degree : - 3 Rated speed rpm : 800	+ Tolerance mm : + 0.55 + Rated speed rpm : 1250
·	Traced speed (pill 1 1250
Rack travel in mm : 0.50 Tolerance mm : + 0.20	+ Rated speed rpm : 1094
governon enring	† rack travel mm : 11.80
governor spring pre-tension	Rated speed rpm : 1124
click setting x : 2.50	+ Tolerance 1/min : + 5
	+ rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85
Rated speed rpm : 750	+ Tolerance mm : +- 0.55 + Rated speed rpm : 1250
Aneroid pressure hPa : 800	†
nra : 800 Del. quantity	Rated speed rpm : 1095
cm3/1000 strokes : 141.0	rack travel mm : 11.80
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1125 Tolerance 1/min : +- 5

rack travel mm : 4.00	+ Rated speed rpm : 1050
	+ rack travel mm : 12.50
rack travel ma : 0.85 Tolerance mm : +- 0.55	† Tolerance mm : + 0.10
Tolerance mm : +- 0.55	1
Tolerance mm : +- 0.55 Rated speed rpm : 1250	Rated speed rpm : 1050
rideed opeca (pii : 120	nack travel mm . 12.90
	rack travel mm : 12.80 Tolerance mm : + 0.10
	+ loterance mm : + U.IU
Rated speed rpm : 1096 rack travel mm : 11.80	+
rack travel mma : 11.80	+ Rated speed rpm : 960
	rack travel mm : 13.60 Tolerance mm : + 0.15
Rated speed rpm : 1126	+ Tolerance mm : + 0.15
Tolerance 1/min : + 5	
rack travel mm : 4.00	
rack crafec lies 4.00	ANEROID/ALTITUDE
mark travel on a 0.95	
rack travel mm : U.05	+ COMPENSATOR TEST
ioterance mm : +- U.55	. †
rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250	+
	+ SETTING
	+
Rated speed rpm : 1097	Rated speed rpm : 500
rack travel mm : 11.80	Pressure hPa : 800
	rack travel mm : 14.00
Rated speed rpm : 1127	Tolerance mm : +- 0.10
	T locerance min . T 0.10
	T 24 4 5 500
rack travel mm : 4.00	+ Rated speed rpm : 500
	Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.00 Tolerance mm : + 0.10
rack travel mm : 0.85	† rack travel mm : 9.00
Tolerance mm : ← 0.55	+ Tolerance mm : + 0.10
Tolerance mm : + 0.55 Rated speed rpm : 1250	+
	+ MEASUREMENT
	T I I LAOUNGILLAT
	- +
LOW IDLE	- +
LOW IDLE	Rated speed rpm : 500
LOW IDLE	Rated speed rpm : 500
	Rated speed rpm : 500
control lever	Rated speed rpm : 500
control lever position degree : 73.0	- +
control lever	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20
control lever position degree : 73.0 tolerance degree : + 4.0	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550
control lever position degree : 73.0	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing:	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : 5.00	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : 5.00	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : 5.00	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 2.0
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : 5.00	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 2.0
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : - 0.10 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 780 Tolerance 1/min : + 30	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 780 Tolerance 1/min : + 30	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 2.0
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 780 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 750	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 2.0
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 780 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 750	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 2.0
control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 650 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 650 rack travel mm : 5.50 Tolerance mm : 5.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 780 Tolerance 1/min : + 30	Rated speed rpm : 500 Pressure hPa : 325 rack travel mm : 11.15 Tolerance mm : + 0.20 Pressure hPa : 550 rack travel mm : 13.45 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 2.0

Rated speed rpm	: 100
rack travel mm	: 20.00
Tolerance mms	: ← 0.20
Del. quantity	
cm3/1000 strokes	: 197.0
Tolerance	
cm3/1000 strokes	: + 10.0
Check tolerance	
cm3/1000s.	: ← 13.0

LOW IDLE

Rated speed rpm	:	ઇ	50
Rack travel in mm Tolerance mm Del. quantity	: : +		5. <i>5</i> 0 0.10
T 44 000	:		22.0
cm3/1000 strokes Check tolerance	: 1	-	2.0
cm3/1000s. Spreed Tolerance	: 1	-	3.5
cm3/1000 strokes Check tolerance	:		3.5
cm3/1000s.	:		5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.02.98 : ISO 4113

Combination No. : 0 400 876 425

Injection pump

Fump designation : PES6A95D410RS2864

EP type number : 0 410 896 888

Governor

Governer design. : RSV400...1050A2C2263

: -7L

Governer no.

: 0 420 232 606

Cust. part No. : 87 801 601

Customer-spec. information

Customer

: FNH-GEOTECH

Motor

: 7.5 L

Power KW

: 149.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 8 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

2.0

x inside diameter :

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 2.60 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 800

Rack travel in mm: 14.10 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 151.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed

H05

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	‡
	CONTROL LEVER
Rated speed rpm : 650	<pre>+ contro! lever + position degree : 98.0 + tolerance degree : + 4.0</pre>
Rack travel in mm : 4.50 Tolerance mm : + 0.10	
Del. quantity cm3/1000 strokes : 20.0	ASSEMBLY GOVERNOR SETTING
Tolerance cm3/1000 strokes : +- 2.0	+ Rated speed rpm : 1078 + rack travel mm : 11.70
Check tolerance cm3/1000s. : + 4.5	Rated speed rpm : 1105
Spreed	Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : 5.5	+ rack travel mm : 4.00
Check tolerance cm3/1000s. : 9.0	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
	Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP	1070
WITH GOVERNOR	Rated speed rpm : 1079 rack travel mm : 11.70
CUIDE SUFFICE PROTITION	Rated speed rpm : 1106
GUIDE SLEEVE POSITION	+ Tolerance 1/min : +- 5 + rack travel mm : 4.00
control lever	rack travel mm : 0.85
position degree : -3 Rated speed rpm : 800	Tolerance mm : + 0.55 Rated speed rpm : 1250
Rack travel in mm: 0.50	‡
Tolerance mm : + 0.20	+ Rated speed rpm : 1080 + rack travel mm : 11.70
governor spring pre-tension	+ Rated speed rpm : 1107
click setting x : 2.50	Tolerance 1/min : + 5 + rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85
	+ Tolerance mm : + 0.55
Rated speed rpm : 800 Aneroid pressure	+ Rated speed rpm : 1250
hPa : 1200 Del. quantity	Rated speed rpm : 1081
cm3/1000 strokes : 151.0 Tolerance	rack travel mm : 11.70
cm3/1000 strokes : + 1.0	Rated speed rpm : 1108
Check tolerance cm3/1000s. : + 3.0	Tolerance 1/min : +- 5 rack travel mm : 4.00
Spreed Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : + 0.55 Rated speed rpm : 1250

Rated speed rpm rack travel mm	: 1082 : 11.70
Rated speed rpm Tolerance 1/min rack travel mm	: 1109 : ← 5 : 4.00
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55 : 1250
Rated speed rpm rack travel mmm	: 1083 : 11.70
Rated speed rpm Tolerance 1/min rack travel mm	: ← 5
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 1250
LOW IDLE	
control lever position degree tolerance degree	: 78.0 : + 4.0
Setting point w/c	out bumper spring
Rated speed rpm rack travel mm Tolerance mm	
	: +- 0.10
Testing:	: +- 0.10
Testing: Rated speed rpm rack travel mm Tolerance mm	: 650 : 4.50 : ← 0.10
Rated speed rpm rack travel mm	: 650 : 4.50 : ← 0.10 : 2.00 : 740
Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm	: 650 : 4.50 : ← 0.10 : 2.00 : 740
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Tolerance 1/min TORQUE CONTROL Rated speed rpm rack travel mm	: 650 : 4.50 : + 0.10 : 2.00 : 740 : + 30 : 800 : 14.10 : + 0.10 : 500

rack travel mm Tolerance mm	: 11.90 : + 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 1030 : 12.70 : ← 0.10	
Rated speed rpm rack travel mm Tolerance mm	: 950 : 13.35 : +- 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.15 : +- 0.10	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 7.80 : + 0.05	
MEASUREMENT		
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 775 : 13.50 : + 0.05	
Pressure hPa rack travel mm Tolerance mm	: 520 : 11.10 : + 0.20	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa Rated speed rpm Del. quantity	: – : 500	
cm3/1000 strokes	: 70.5	
Tolerance cm3/1000 strokes	: ← 1.0	
Check tolerance cm3/1000S.	: ← 3.0	
STARTING FUEL DELIVERY		

Rated speed rpm : 100

H07

: 20.00
: 0.20
: 160.0
: ← 8.0
: ← 11.0

LOW IDLE

Rated speed rpm	:	650
	: : +-	4.50 - 0.10
Del. quantity cm3/1000 strokes Tolerance	:	20.0
cm3/1000 strokes Check tolerance	: +	- 2.0
cm3/1000s. Spreed	: +	- 4.5
Tolerance cm3/1000 strokes	:	5.5
Check tolerance cm3/1000s.	:	9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23,02,98 Edition Test oil : ISO 4113

Combination No. : 0 400 876 430

Injection pump

Pump designation : PES6A95D41ORS2864 EP type number : 0 410 896 888

Governor

Governer design. : RSV400...1050A0C2263

: -10L

Governer no. : 0 420 232 619

Cust. part No. : 87 801 603

Customer-spec. information

Customer : FNH-GEOTECH

Motor : P 396 Power KW : 142.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : ണ

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 2.60 Prestroke mm : + 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance m_0 : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

750 Rated speed rpm :

Rack travel in mm: 15.20 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 154.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance : + 3.0	Check tolerance cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	
 ‡	CONTROL LEVER
Rated speed rpm : 450	<pre>control lever position degree : 97.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 5.60 + Tolerance mm: : + 0.10	-
Del. quantity + cm3/1000 strokes : 15.0 +	ASSEMBLY GOVERNOR SETTING
Tolerance +	Rated speed rpm : 1093
cm3/1000 strokes : + 2.0 + Check tolerance +	rack travel mm : 12.40
cm3/1000s. : + 4.5 Spreed	Rated speed rpm : 1158 Tolerance 1/min : +- 5
Tolerance +	rack travel mm : 4.00
cm3/1000 strokes : 5.5 + Check tolerance +	rack travel mm : 0.85
cm3/1000s. : 9.0	Tolerance mm : +- 0.55 Rated speed rpm : 1270
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	Rated speed rpm : 1074 rack travel mm : 12.40
CUIDE OF EDUE DOCTITON	Rated speed rpm : 1159
GUIDE SLEEVE POSITION +	Tolerance 1/min : +- 5 rack travel mm : 4.00
control lever	rack travel mm : 0.85
position degree : -3 Rated speed rpm : 800	Tolerance mm : +- 0.55 Rated speed rpm : 1270
Rack travel in mm: 0.50	D. J. J. J. J. J. J. J. J. J. J. J. J. J.
Tolerance mm : + 0.20 +	Rated speed rpm : 1095 rack travel mm : 12.40
governor spring + pre-tension +	Rated speed rpm : 1160
click setting x : 4.00	Tolerance 1/min : +- 5 rack travel mm : 4.00
<u> </u>	
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85 Tolerance mm : + 0.55
Rated speed rpm : 750	Rated speed rpm : 1270
Aneroid pressure + hPa : 1200 +	
Del. quantity cm3/1000 strokes : 154.0	Rated speed rpm : 1096 rack travel mm : 12.40
Tolerance + cm3/1000 strokes : +- 1.0 +	Rated speed rpm : 1161 Tolerance 1/min : +- 5

rack travel mm	• 4.00 1	Potad speed nom	. 500
I der tidaet um	· 4.00 I	Rated speed rpm	: 500 : 15.25
rack travel mm	. 0.85	rack travel mm Tolerance mm	: + 0.10
Toloropeo em	. 0.65	roterance min	: +- 0.10
Tolerance mm Rated speed rpm	10.00	Data dansa dansa	4050
kated speed rpm	: 12/0	Rated speed rpm	: 1050
	†	rack travel mm	: 12.90
	+	rack travel mm Tolerance mm	: ← 0.05
Rated speed rpm	: 1097		
rack travel mm	: 12.40	Rated speed rpm	: 1050
	+	rack travel mm	
Rated speed rpm	: 1162	Tolerance mm	: + 0.10
Tolerance 1/min			
rack travel mm		Dated speed rom	• 050
den cidect inn	. 4.00	Rated speed rpm rack travel mm Tolerance mm	. 1/ 25
rack travel am	. 0.05	Talanana wa	14.60
		loterance imi	: +- 0.10
Tolerance mm	: + 0.35		
Rated speed rpm	: 1270 +		
	+	ANEROID/ALTITUDE	
	+	COMPENSATOR TEST	
Rated speed rpm	: 1098		
rack travel mm	: 1098 : 12.40		
	Ι	SETTING	
Rated speed rpm	· 1167	00111140	
Talamana 1/min	1100	Dated annual com	. 500
Tolerance 1/min		Rated speed rpm	: 500
rack travel mm	: 4.00 +	Pressure hPa	
	+	rack travel mm	
rack travel mm	: 0.85	Tolerance mm	: +- 0.10
Tolerance mm	: ← 0.55 }		
Rated speed rpm	: 1270	Rated speed rpm	: 500
	1	Pressure hPa	
		rack travel mm	: - 10.80
LOW IDLE	T	rack travel mm	: ÷ 0.05
LOW INCE	T	Tolerance mm	: +- 0.03
	Ť	MEACHDEMENT	
	Ţ	MEASUREMENT	
control lever	75.0		500
position degree	: /3.U +	Rated speed rpm	: 500
tolerance degree	: ← 4.G +		
	+	Pressure hPa	: 750
Setting point w/o	ut bumper spring +	rack travel mm	: 13.70
4 ,	1	Tolerance mm	
Rated speed rpm	: 450	CC. W. FOO HIPH	5.55
nack traval ma	· 5 10	Praccure hDa	: 500
rack travel mm Tolerance mm	· _ 0.10	nock though	. 200 . 40 CO
ioterance mm	· - 0.10 †	Pressure hPa rack travel mm Tolerance mm	11.00
	_	iolerance mm	: +- 0.20
Testing:	+		
	+		
Rated speed rpm	: 450 		
rack travel mm	: 5.60 [↓]	FUEL DELIVERY CHA	RACTERISTICS
rack travel mm Tolerance mm	: + 0.10 \frac{1}{2}		* * * * * * * * * * * * * * * * * * *
	+		
rack travel mm	+	Aneroid pressure	
rack travel mm	+	Aneroid pressure	
rack travel mm Rated speed rpm	: 2.00 : 575		: -
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 575	hPa Rated speed rpm	: - : 500
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 575	hPa Rated speed rpm	: - : 500
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 575	hPa Rated speed rpm Del. quantity cm3/1000 strokes	: - : 500 : 98.5
rack travel mm Rated speed rpm Tolerance 1/min TORQUE CONTROL	: 2.00 : 575 : + 30	hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 98.5
Tolerance 1/min TORQUE CONTROL	: 2.00 : 575 : + 30	hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 98.5
Tolerance 1/min TORQUE CONTROL Rated speed rpm	: 2.00 : 575 : + 30 : 750	hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 98.5 : +- 1.0
Tolerance 1/min	: 2.00 : 575 : + 30 : 750 : 15.20	hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 98.5 : ← 1.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.00
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 163.0
Tolerance
cm3/1000 strokes : + 8.0
Check tolerance
cm3/1000s. : + 11.0

LOW IDLE

Pated speed rpm : 450 Rack travel in mm : 5.60 Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See see pocard(s) W400/...

Edition Test oil

: 23.02.98 : ISO 4113

Combination No. : 0 400 876 434

Injection pump

Pump designation : PES6A95D41ORS2864 EP type number : 0 410 896 888

Governor

Governer design. : RSV400...1050A8C2263

: -11L

Governer no.

: 0 420 232 635

Cust. part No. : 87 801 607

Customer-spec. information

Customer : NH Motor : P 396 : 176.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

40 temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar Tolerance bar : \leftarrow 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.60 : ← 0.05 Tolerance mm

Check

tolerance mm: $\leftarrow 0.10$

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: **←** 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

700 Rated speed rpm :

Rack travel in mm: 13.70

Tolerance mm : \leftarrow 0.10

Del. quantity	Aneroid pressure
cm3/1000 strokes : 135.0	hPa : 1200 Del. quantity
Tolerance	cm3/1000 strokes : 135.0
cm3/1000 strokes : +- 1.0 +	Tolerance
	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : + 3.0	$cm3/1000s.$: \leftarrow 3.0
	Spreed
Spreed	Tolerance
Talanana	cm3/1000 strokes : 3.5
Tolerance + cm3/1000 strokes : 3.5 +	Check tolerance cm3/1000s. : 8.0
this/1000 strokes: 3.3	cm3/1000s. : 8.0
Check tolerance	
cm3/1000s. : 8.0	
	CONTROL LEVER
1	
· · · · · · · · · · · · · · · · · · ·	control lever
Rated speed rpm : 450	position degree : 97.0
Dool Annual In my a 5 75	tolerance degree : +- 4.0
Rack travel in mm: 5.75 Tolerance mm: + 0.10	
Del. quantity	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : 12.0	HOUSEL GOVERNOR SETTING
Tolerance	Rated speed rpm : 1095
cm3/1000 strokes : + 2.0	rack travel mm : 11.10
Check tolerance	
cm3/1000s. : + 4.5	Rated speed rpm : 1165
Spreed	Tolerance 1/min : +- 5
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : 5.5 + Check tolerance +	rack travel mm : 0.85
cm3/1000S, : 9.0	rack travel mm : 0.85 Tolerance mm : +- 0.55
1	Rated speed rpm : 1300
1	nated speed (piii 1 1000
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	Rated speed rpm : 1096
+	rack travel mm : 11.10
†	Bakad annud a sa AAAA
CHANE CLEME DOCTTAN	Rated speed rpm : 1166
GUIDE SLEEVE POSITION	Tolerance 1/min : +- 5 rack travel mm : 4.00
I	TOOK CLOVELIMH . 4.00
control lever	rack travel mm : 0.85
position degree : -3	Tolerance mm : + 0.55
Rated speed rpm : 800	Rated speed rpm : 1300
+	
Rack travel in mm: 0.50	
Tolerance mm : + 0.20	Rated speed rpm : 1097
#	rack travel mm : 11.10
governor spring + pre-tension +	Rated speed rpm : 1167
click setting x : 4.50	Tolerance 1/min : +- 5
T	rack travel mm : 4.00
<u> </u>	1100
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85
 	rack travel mm : 0.85 Tolerance mm : + 0.55
Rated speed rpm : 700	Rated speed rpm : 1300
+	

Rated speed rpm	: 1098
rack travel mm	: 11.10
Rated speed rpm	: 1168
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
rack travel mm Tolerance mm Rated speed rpm	: ← 0.55
Rated speed rpm rack travel mm	
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 1300
Rated speed rpm	: 1100
rack travel mm	: 11.10
Rated speed rpm	: 1170
Tolerance 1/min	: ← 5
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 1300
LOW IDLE	
control lever position degree tolerance degree	: 78.0 : +- 4.0
Testing:	
Rated speed rpm	: 450
rack travel mm	: 5.75
Tolerance mm	: + 0.10
rack travel mm	: 2.00
Rated speed rpm	: 585
Tolerance 1/min	: + 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.70 : + 0.10

Rated speed rpm rack travel mm Tolerance mm	: 500 : 13.75 : + 0.10	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 11.20 : + 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.50 : + 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST	n an de de la companya de la companya de la companya de la companya de la companya de la companya de la companya	
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.75 : + 0.10	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.75 : +- 0.05	
MEASUREMENT		
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 650 : 12.65 : + 0.05	
Pressure hPa rack travel mm Tolerance mm	: 450 : 11.10 : + 0.20	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure		
hPa Rated speed rpm	500	
Del. quantity cm3/1000 strokes Tolerance	: 80.0	
cm3/1000 strokes Check tolerance	: +- 1.0	
cm3/1000s.	: +- 3.0	

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm	: :	100 20.25
Tolerance mm Del. quantity	; +	~ 0.75
cm3/1000 strokes Tolerance	:	164.0
cm3/1000 strokes Check tolerance	: +	- 8.0
cm3/1000s.	: +	- 11.0

LOW IDLE

:		450
:		5.75
:	+-	0.10
:		12.0
•	+-	2.0
•	•	2.0
•	+-	4.5
•	•	7.7
		F F
•		5.5
:		9.0
	• • • • • • • • • • • • • • • • • • • •	: +-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.02.98 : ISO 4113

Combination No. : 0 400 876 435

Injection pump

Pump designation : PES6A95D410RS2864 EP type number : 0 410 896 888

Governor

Governer design. : RSV400...1050A8C2263

: -12L

Governer no.

: 0 420 232 636

Cust. part No. : 87 801 605

Customer-spec. information : NH Customer : 7.5 L Motor Power KW : 185.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 : + 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 800

Rack travel in mm: 13.45 Tolerance mm : \leftarrow 0.10

Del. quantity

cm3/1000 strokes : 139.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.0

	+ Tolerance
Spreed	- cm3/1000 strokes : 3.5
·	+ Check tolerance
Tolerance	+ cm3/1000s. : 8.0
cm3/1000 strokes : 3.5	<u>†</u>
Check tolerance	
cm3/1000s. : 8.0	+ CONTROL LEVER
	T control lever
	position degree : 94.0
Rated speed rpm : 650	tolerance degree : + 4.0
Rack travel in mm: 4.90	I
Tolerance wa : + 0.10	ASSEMBLY GOVERNOR SETTING
Del. quantity	+
cm3/1000 strokes : 20.0	+ Rated speed rpm : 1058
Tolerance	rack travel mm : 11.40
cm3/1000 strokes : +- 2.0	Poted aread area . 1001
Check tolerance cm3/1000s. : + 4.5	+ Rated speed rpm : 1091 + Tolerance 1/min : + 5
Spreed	rack travel mm : 4.00
Tolerance	+ 4.00
cm3/1000 strokes : 5.5	+ rack travel mm : 0.85
Check tolerance	Tolerance mm : + 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1250
	I
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1059
WITH GOVERNOR	+ rack travel mm : 11.40
	+
	Rated speed rpm : 1092
GUIDE SLEEVE POSITION	+ Tolerance 1/min : + 5 + rack travel mm : 4.00
GOIVE BEEEVE FOOTILOW	Tack travet in . 4.00
	+ rack travel mm : 0.85
control lever	Tolerance mm : + 0.55
position degree : -3	+ Rated speed rpm : 1250
Rated speed rpm : 800	†
Rack travel in mm: 0.50	Deted speed ppp : 1040
Tolerance man : +- 0.20	+ Rated speed rpm : 1060 + rack travel mm: : 11.40
TOTAL GIRLS THE TOTAL STREET	Tuck Clayer Inni: 11140
governor spring	Rated speed rpm : 1093
pre-tension	+ Tolerance 1/min : + 5
click setting $x : 3.50$	rack travel mm : 4.00
	† rack travel mm : 0.85
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance mm : + 0.55
THE COMP PROSTED OF THE COMP PION	Rated speed rpm : 1250
Rated speed rpm : 800	+
Aneroid pressure	+
hPa : 1200	+ Rated speed rpm : 1061 + rack travel mm : 11.40
Del. quantity cm3/1000 strokes : 139.5	rack travel mm : 11.40
Tolerance	Rated speed rpm : 1094
cm3/1000 strokes : +- 1.0	+ Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 4.00
$cm3/1000s.$: \leftarrow 3.0	+
Spreed	+ rack travel mm : 0.85

Tolerance mm	: +- 0.55
Rated speed rpm	: 1250
Rated speed rpm rack travel mm	
Rated speed rpm	: 1095
Tolerance 1/min	: ← 5
rack travel mm	: 4.00
rack travel mma	: 0.85
Tolerance mmm	: + 0.55
Rated speed rpma	: 1250
Rated speed rpm	: 1063
rack travel mm	: 11.40
Rated speed rpm	: 1096
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel mm Tolerance mm Rated speed rpm	: ← 0. 55
LOW IDLE	
control lever position degree tolerance degree Testing:	: 75.0 : +- 4.0
Rated speed rpm	: 650
rack travel mm	: 4.90
Tolerance mm	: ← 0.10
rack travel mm	: 2.00
Rated speed rpm	: 740
Tolerance 1/min	: + 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 800 : 13.45 : + 0.10
Rated speed rpm	: 500
rack travel mm	: 13.50
Tolerance mm	: ← 0.10
Rated speed rpm	: 1025
rack travel mm	: 11.90
Tolerance mm	: ← 0.05
Rated speed rpm	: 1025

rack travel mm Tolerance mm	: 12.40 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.50 : + 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 8.10 : + 0.05
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 750 : 12.40 : + 0.05
Pressure hPa rack travel mm	: 550 : 10.00
Tolerance mm	: - 0.20
Tolerance mm FUEL DELIVERY CHA	: 0.20
FUEL DELIVERY CHA	: 0.20
FUEL DELIVERY CHA	: 0.20
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	RACTERISTICS : - : 500
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: - 0.20 RACTERISTICS :
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - 0.20 RACTERISTICS :
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: - 0.20 RACTERISTICS :
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm	: - 0.20 RACTERISTICS :
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm rack travel mm	: - 0.20 ARACTERISTICS : : 500 : 68.5 : + 1.0 : + 3.0 ALVERY : 100 : 20.25 : + 0.75
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: - 0.20 RACTERISTICS : : 500 : 68.5 : + 1.0 : + 3.0 IVERY : 100 : 20.25 : + 0.75 : 160.0

LOW IDLE

Rated speed rpm	:		650
Rack travel in mm	:		4.90
Tolerance mm	:	+-	0.10
Del. quantity			
cm3/1000 strokes	:		20.0
Tolerance	•		
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+-	4.5
Spreed			
Tolerance			
cm2/1000 strokes	•		5.5
Check tolerance	•		
cm3/1000s.			9.0
CHO/ 10003.	۰		7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 25.02.98 : ISO 4113

Combination No. : 9 400 030 669

Injection pump

Pump designation : PES6A100b320/3RS3503

EP type number : 9 410 037 213

Governor

Governer design. : RQV400...1250A91301R

Governer no.

: 9 420 030 158

Cust. part No. : TATA-CUMMINS

Customer-spec. information Customer : CUMMINS Motor : 6BTAA Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2;

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

: 9 451 037 430 Overflow valve

Inlet press. bar : ; **←** 0.1 Tolerance bar

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

207.0 bar Tolerance bar : +- 3.0

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 3.10 : +- 0.05 Tolerance mm Check

tolerance mm

: + 0.10

Rack travel in mm: 10.50 : ← 1.50 Tolerance mm

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 : +- 0.10 Tolerance

Check

tolerance *NW : + 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.75

Tolerance mm	: + 0.05
Rack travel in mm Tolerance mm	: 6.00 : + 0.10
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP
SUIDE SLEEVE TRAV	EL
Rated speed rpm guide sleeve	•
travel mm Tolerance mm	: 8.48 : + 0.15
Rated speed rpm guide sleeve	
travel mm Tolerance mm	: 1.71 : + 0.20
Rated speed rpm guide sleeve	
travel mm Tolerance mm	: 4.97 : + 0.25
Rated speed rpm guide sleeve	: 499
travel mm Tolerance mm	: 2.75 : ← 0.25
Rated speed rom guide sleeve	: 549
travel mm Tolerance mm	: 3.30 : + 0.25
Rated speed rpm guide sleeve	
travel mm Tolerance mm	: 3.37 : + 0.25
Rated speed rpm guide sleeve	
travel mm Tolerance mm	: 11.50 : + 0.50
GUIDE SLEEVE POST	TION
Rated speed rpm	: 1250
Rack travel in mm Tolerance mm	

control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1485 LOW IDLE control lever position degree : 15.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. : > 9.00 Testing: Rated speed rpm : 400 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75 Tolerance mm : + 0.10	CONTROL LEVER	
rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1485 LOW IDLE control lever position degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. : > 9.00 Testing: Rated speed rpm : 400 rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 6.00 Tolerance nm : 400 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75	position degree	: 61.0 : ← 4.0
Rated speed rpm : 1425 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1485 LOW IDLE control lever position degree : 15.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. : > 9.00 Testing: Rated speed rpm : 400 rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 1250 rack travel mm : 11.75	rack travel mm Rated speed rpm	: 1300
Tolerance mm : + 0.50 Rated speed rpm : 1485 LOW IDLE control lever position degree : 15.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 9.00 Testing: Rated speed rpm : 400 rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75	Rated speed rpm	: 1425
control lever position degree : 15.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. :> 9.00 Testing: Rated speed rpm : 400 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 1250 rack travel mm : 11.75	Tolerance mm	: ← 0.50
position degree : 15.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. : > 9.00 Testing: Rated speed rpm : 400 rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 10.00 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 1250 rack travel mm : 11.75	LOW IDLE	
Rated speed rpm : 100 CRT mm min. :> 9.00 Testing: Rated speed rpm : 400 rack travet mm : 6.90 Toterance mm : + 0.10 rack travet mm : 2.00 Rated speed rpm : 625 Toterance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travet mm : 11.75 Toterance mm : + 0.05 Rated speed rpm : 750 rack travet mm : 11.75 Toterance mm : + 0.10 Rated speed rpm : 1250 rack travet mm : 11.75 Toterance mm : 1250 rack travet mm : 11.75	position degree	: 15.0 : +- 4.0
CRT mm min. :> 9.00 Testing: Rated speed rpm : 400 rack travel mm : 6.90 Toterance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 1250 rack travel mm : 11.75	Setting point w/o	ut bumper spring
Testing: Rated speed rpm : 400 rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75	Rated speed rpm	: 100
Rated speed rpm : 400 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 1250 rack travel mm : 11.75	CRT mm min.	: > 9.00
rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 1250 rack travel mm : 11.75	Testing:	
Rated speed rpm : 625 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75	rack travel mm	: 6.00
Rated speed rpm : 1000 rack travel mm : 11.75 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75	Rated speed rpm	: 625
rack travel mm : 11.75 Tolerance mm : + 0.10 Rated speed rpm : 1250 rack travel mm : 11.75	Rated speed rpm rack travel mm	: 11.75
rack travel mm : 11.75	rack travel mm	: 11.75
	rack travel mm	: 11.75

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 550
Pressure hPa : 600
rack travel mm : 11.75
Tolerance mm : + 0.10

Rated speed rpm : 550
Fressure hPa : rack travel mm : 10.20
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 550

Pressure hPa : 400 rack travel mm : 11.20 Tolerance mm : + 0.20

Pressure hPa : 340 rack travel mm : 10.80 Tolerance mm : + 0.20

Start interlock

Rated speed rpm : > 170 Rated speed rpm : > 300

Check

speed 1/min : < 190

Check

speed 1/min : < 340

FUEL DELIVERY CHARACTERISTICS

rack travel mm : 11.75
Tolerance mm : + 0.10

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.00 Tolerance mm : + 0.75

LOW IDLE

H23

Rack travel in mm : 6.00 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 14.02.98 : ISO 4113

Combination No. : 9 400 030 751

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1050A0C866R

Governer no.

: F 002 A20 202

Cust. part No. : 393 0158

Customer-spec. information Customer : CUMMINS

Motor

: 6BT

Power KW

: 94.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar

: **←** 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

17.0 Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 : +- 0.10

Tolerance

Check

tolerance *NW : +- 0.29

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.40

Tolerance mm: $\leftarrow 0.05$

Del. quantity	Aneroid pressure
cm3/1000 strokes : 90.3	hPa : 950 Del. quantity
Tolerance + 1.0	cm3/1000 strokes : 90.3 Tolerance
	cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : + 3.0	Check tolerance cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Tolerance	Check tolerance
cm3/1000 strokes : 4.0	cm3/1000s. : 6.5
Check tolerance	
cm3/1000s. : 6.5	CONTROL LEVER
1	control lever
Rated speed rpm : 475	position degree : 102.0
Rack travel in mm: 6.75	tolerance degree : +- 4.0
Tolerance mm : + 0.10	RATED SPEED
Del. quantity	rack travel mm : 11.40
cm3/1000 strokes : 18.6 +	Rated speed rpm : 1095
Tolerance +	Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0 + Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 4.5	Rated speed rpm : 1190
Spreed	Tolerance 1/min : + 15
Tolerance	
cm3/1000 strokes : 6.0	rack travel mm : 0.85
Check tolerance + cm3/1000s. : 8.0 +	Tolerance mm : +- 0.55 Rated speed rpm : 1280
- 0.0	Nated speed (pill : 1200
+	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1200
WITH GOVERNOR	Tolerance 1/min : + 15
Ŧ	
GUIDE SLEEVE POSITION	
	LOW IDLE
t description of the second of	
control lever position degree : - 3	control lever
Rated speed rpm : 800	position degree : 84.0
	tolerance degree : + 4.0
Rack travel in mm: 0.50	
Tolerance mm : +- 0.20	Control lever difference
governor spring	Grad : 18.0 tolerance degree : +- 4.0
pre-tension	totol dilice deglice 4.0
click setting x : 4.00	Setting point w/out bumper spring
	Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 6.25
+	Tolerance mm : \leftarrow 0.10
Rated speed rpm : 1050	0.1.1

Rated speed rpm : 100

		1 not augustitu
CRT mm min.	: > 19.50	+ Del. quantity + cm3/1000 strokes : 103.0 + Tolerance
Testing:		+ cm3/1000 strokes : +- 2.0
Rated speed rpm rack travel mm	: 475 : 6.75	Check tolerance : + 4.0
Tolerance mm	: + 0.10	
	2 00	+ Aneroid pressure
rack travel mm Rated speed rpm	; 2.00 • 610	hPa : - Rated speed rpm : 650
Tolerance 1/min	: - 30) And managed a
		+ cm3/1000 strokes : 88.5
		Tolerance
TORQUE CONTROL	. 4050	cm3/1000 strokes : + 1.0
Rated speed rpm	• 12.40	+ Check tolerance + cm3/1000s. : + 3.0
rack travel mm Tolerance mm	: + 0.05	+ CIRD/ 10003 + 3.0
		+
Rated speed rpm rack travel mm Tolerance mm	: 800	CTARTING FUEL RELIGION
Tolerance man	: + 0.10	STARTING FUEL DELIVERY
10(0.0.100	. 5.15	Rated speed rpm : 100
ANEROID/ALTITUDE		+ Tolerance mm : +- 0.50
COMPENSATOR TEST	,	+ Del. quantity
		cm3/1000 strokes : 121.0
SETTING		+ Tolerance + cm3/1000 strokes : +- 10.0
2E1111AQ		Check tolerance
Rated speed rpm	: 650	- cm3/1000s. : +- 15.0
Pressure hPa	: 950	
rack travel mm	: 13.50	+
Tolerance mm	: ← 0.20	+
Rated speed rpm	• 650	LOW IDLE
Pressure hPa		I com total
	12.00	Rated speed rpm : 475
rack travel mm Tolerance mm	: ← 0.10	+
		Rack travel in mm: 6.75
MEASUREMENT		+ Tolerance mm : +- 0.10
Rated speed rpm	: 650	+ Del. quantity + cm3/1000 strokes : 18.6
daren sheen i hii	. 000	Tolerance
Pressure hPa	: 850	cm3/1000 strokes : + 2.0
rack travel mm	: 13.10	∔ Check tolerance
Tolerance mm		- cm3/1000s. : + 4.5
Pressure hPa	: 800	+ Spreed Tolerance
rack travel mm		+ Tolerance + cm3/1000 strokes : 6.0
Tolerance mm	: + 0.20	Check tolerance
10(0. 4.100 1141)		cm3/1000s. : 8.0
FUEL DELIVERY CH	ARACTERISTICS	
	ALTO LECTION TOO	
Aneroid pressure		End of test specification sheet
hPa	: 950	+
Rated speed rpm		+
4 2 - 4		•

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 20.02.98 : ISO 4113

Combination No.

: F 002 A0Z 051

Injection pump

Pump designation : PES4A95D320/3RS2920

EP type number : F 002 A10 012

6overnor

Governer design. : RSV475...1050A0C931R

Governer no.

: F 002 A20 237

Cust. part No. : 3283921

Customer-spec. information

Customer : CUMMINS

Motor : CUMMINS-4BTA-3.9

Power KW : 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +-2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestruke mm : 2.45 : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 : + 1.50 Tolerance mm

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 9.00

Tolerance : + 0.10 Check

tolerance *NW : + 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.30

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 115.0

Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : + 3.0	+ cm3/1000s. : + 3.0 + Spreed + Tolerance
Spreed	+ cm3/1000 strokes : 4.0 + Check tolerance
Tolerance cm3/1000 strokes : 4.0	cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVER
Rated speed rpm : 475	control lever position degree : 101.0 tolerance degree : + 4.0
Rack travel in mm: 6.25 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 22.0	RATED SPEED rack travel mm : 12.30 Rated speed rpm : 1110 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed	rack travel mm : 4.00 Rated speed rpm : 1195 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1500
CM3/1000S. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1195 Tolerance 1/min : + 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : FREE Rated speed rpm : 800	control lever position degree : 81.0 tolerance degree : + 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20 governor spring	Control lever difference Grad : 20.0 tolerance degree : + 4.0
pre-tension click setting x : 2.50	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 475 + rack travel mm : 5.75 + Tolerance mm : + 0.10
Rated speed rpm : 1050 Aneroid pressure	Rated speed rpm : 100
hPa : 900 Del. quantity	CRT mm min. : > 19.00
cm3/1000 strokes : 115.0	+ Testing:

Rated speed rpm rack travel mm Tolerance mm	: 475 : 6.25 : + 0.10
rack travel mma Rated speed rpma Tolerance 1/min	: 550
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.30 : ← 0.05
Rated speed rpm rack travel 神 Tolerance mm	: 750 : 14.30 : ← 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 900
Rated speed rpm Pressure hPa rack travel man Tülerance mani	: 500 : - : 10.85 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 600 : 13.00 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 400 : 11.70 : ← 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	, , , , , , , , , , , , , , , , , , ,

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 75.9 : + 1.0 : + 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 475
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 0.10

End of test specification sheet

hPa : 900
Rated speed rpm : 750
Del. quantity
cm3/1000 strokes : 129.2
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance

cm3/1000s. : + 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 12.02.98 Edition : 12.02.98 Test oil : ISO 4113

Combination No. : F 002 A0Z 092

Injection pump

Pump designation : PES6A95D320/3RS2928

EP type number : F 002 A10 019

6overnor

Governer design. : RSV450...750A4C965R

Governer no. : F 002 A20 251

Cust. part No. : 393 3100

Customer-spec. information Customer : CUMMINS : 6BT - 590 Motor Power KW : 89.4

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 4 Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

2.0 Inlet press. bar : Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 : +- 0.05 Tolerance mm Check

: +- C.10 tolerance mm

Rack travel in mm: 10.50 Tolerance m : +- 1.50

Firing order : 1-5-3-6-2

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.50 Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm: 11.75 Tolerance nm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 110.0

Tolerance +	Tolerance
cm3/1000 strokes : \leftarrow 1.0	cm3/1000 strokes : +- 1.0
1	Check tolerance
Check tolerance	cm3/1000s. : +- 3.0
cm3/1000s. : + 3.0	
tms/1000s — 5.0	Spreed
<u> </u>	Tolerance
Spreed	cm3/1000 strokes : 4.0
+	Check tolerance
Tolerance	cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	
Check tolerance	
cm3/1000s. : 6.5	CONTROL LEVER
UB3/10003 0.3	CONTROL LEVER
t	control lever
. +	position degree : 96.0
Rated speed rpm : 450 +	tolerance degree : +- 4.0
+	
Rack travel in mm: 7.50	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 10.70
Del. quantity	Rated speed rpm : 800
cm3/1000 strokes : 14.5	
	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : + 2.0	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 855
cm3/1000s. : + 4.5	Tolerance 1/min : + 5
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 6.0	Tolerance mm : + 0.55
Check tolerance	Rated speed rpm : 950
cm3/1000s. : 8.0	nated opeca i più : 750
(III)/10005 0.0	rack travel mm : 4.00
T	
(-)	Rated speed rpm : 865
(B) SETTING OF INJECTION PUMP +	Tolerance 1/min : + 15
WITH GOVERNOR +	
+	
<u>1</u> .	
T	
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION	LOW IDLE
‡	
control lever	control lever
control Lever position degree : FREE	control lever position degree : 81.0
control lever	control lever
control lever position degree : FREE Rated speed rpm : 800	control lever position degree : 81.0 tolerance degree : +- 4.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50	control lever position degree : 81.0 tolerance degree : +- 4.0 Control lever difference
control lever position degree : FREE Rated speed rpm : 800	control lever position degree : 81.0 tolerance degree : +- 4.0 Control lever difference Grad : 15.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 81.0 tolerance degree : +- 4.0 Control lever difference
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 81.0 tolerance degree : +- 4.0 Control lever difference Grad : 15.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 450
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 450 rack travel mm : 7.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 450
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 81.0 tolerance degree : +- 4.0 Control lever difference Grad : 15.0 tolerance degree : +- 6.0 Setting point w/out bumper spring Rated speed rpm : 450 rack travel mm : 7.00 Tolerance mm : +- 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 450 rack travel mm : 7.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 450 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure hPa : -	control lever position degree : 81.0 tolerance degree : +- 4.0 Control lever difference Grad : 15.0 tolerance degree : +- 6.0 Setting point w/out bumper spring Rated speed rpm : 450 rack travel mm : 7.00 Tolerance mm : +- 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure hPa : -	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 450 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure	control lever position degree : 81.0 tolerance degree : + 4.0 Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 450 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100

Rated speed rpm : 450 rack travel mm : 7.50 Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 750 rack travel mm : 11.75 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 118.5

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : \leftarrow 15.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm : 7.50
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 14.5
Tolerance
cm3/1000 strokes : + 2.0

Check tolerance cm3/1000s. : +- 4.5

Spreed

Tolerance cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.02.98 Test oil : ISO 4113

Combination No. : F 002 A0Z 093

Injection pump

Pump designation : PES6A95D32D/3RS2928

EP type number : F 002 A10 019

Governor

Governer design. : RSV450...750A7C966R

6overner no. : F 002 A20 250

Cust. part No. : 3933102

Customer-spec. information Customer : CUMMINS : 68TA-590 Motor : 116.2 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C temp. "C : 40 Tolerance "C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter: 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.65
Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2 : - 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 7.50 : +- 0.50 Tolerance Check

tolerance *NW

: **←** 0.75

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm: 13.35 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 131.0

Tolerance	+	Tolerance
cm3/1000 strokes	: + 1.0 +	cm3/1000 strokes : + 1.0
	+	Check tolerance
Check tolerance	t	cm3/1000s. : + 3.0
cm3/1000s.	: + 3.0 +	Spreed
	+	Tolerance
Spreed	+	cm3/1000 strokes : 4.0
	+	Check tolerance
Tolerance	+	cm3/1000s. : 6.5
cm3/1000 strokes	: 4.0	
	+	
Check tolerance	, <u> </u>	
cm3/1000s.	: 6.5	CONTROL LEVER
	+	
	+	control lever
	+	position degree : 97.0
Rated speed rpm	: 450 +	tolerance degree : +- 4.0
	†	
Rack travel in mm		RATED SPEED
Tolerance mm	: ← 0.10 +	rack travel mm : 12.30
Del. quantity	+	Rated speed rpm : 795
cm3/1000 strokes	: 8.5	Tolerance 1/min : +- 5
Tolerance	+	
cm3/1000 strokes	: + 2.0 +	rack travel mm : 4.00
Check tolerance	+	Rated speed rpm : 835
cm3/1000s.	: + 4.5	Tolerance 1/min : +- 5
Spreed	+	
Tolerance	+	rack travel mm : 0.85
cm3/1000 strokes	: 6.0	Tolerance mm : +- 0.55
Check tolerance	+	Rated speed rpm : 950
cm3/1000s.	: 8.0	
	+	rack travel mm : 4.00
	+	Rated speed rpm : 850
(B) SETTING OF IN	JECTION PUMP +	Tolerance 1/min : +- 15
WITH GOVERNOR	+	
	†	
GUIDE SLEEVE POSIT	rion 🗼	LOW IDLE
	+	
	+	
control lever	+	control lever
position degree		position degree : 78.0
Rated speed rpm	: 800 +	tolerance degree : +- 4.0
Dank Americal Service	. 0.50	Combinat Lavier defference
Rack travel in mm		Control lever difference
Tolerance mm	: + U.ZU †	Grad : 19.0
	†	tolerance degree : \leftarrow 6.0
governor spring	+	Orthonormal transfer to the transfer to
pre-tension	, , , , , , , , , , , , , , , , , , , ,	Setting point w/out bumper spring
click setting x	: 4.65	Dated aread /50
	†	Rated speed rpm : 450
FIRE LOAD BELTUED	AT FULL LOSS STOR	rack travel mm : 6.80
FULL LUAD DELIVERY	Y AT FULL LOAD STOP	Tolerance mm : \leftarrow 0.10
0-1-4	. 750	Ontrol amond ann : 400
Rated speed rpm	: 750 +	Rated speed rpm : 100
Aneroid pressure	· †	ODT
hPa	: - +	CRT mm min. : > 19.00
Del. quantity	+	
cm3/1000 strokes	: 131.0 +	Testing:

Rated speed rpm : 450 rack travel mm : 7.3 7.30 : **←** 0.10 Tolerance nm

TORQUE CONTROL

Rated speed rpm : 750 rack travel mms : 13.35 : +- 0.05 Tolerance mm

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : **←** 0.50

Del. quantity

cm3/1000 strokes : 117.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 450

7.30 Rack travel in mm : : +- 0.10 Tolerance mm Del. quantity

cm3/1000 strokes : 8.5 Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 4.5

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 04.02.98 : ISO 4113

Combination No. : 0 402 034 702

Injection pump

Pump designation : PES4P120E120RS3379

EP type number : 0 412 024 702

Governor

Governer design. : RQV475...1250PA1380K

Governer no. : 0 421 815 560

Cust. part No. : 3933367

Customer-spec. information Customer : CDC Motor : 4BTA-A Power KW : 82.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-3-4-2 Firing order

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 : +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 10.15 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 118.5	+ Tolerance mm : +- 0.25
Tolerance	Rated speed rpm : 1660 guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	+ Rated speed rpm : 1250 - Aneroid pressure
cm3/1000 strokes : 8.0	hPa : 350 Del. quantity
Check tolerance cm3/1000S. : 12.0	cm3/1000 strokes : 118.5
	cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm : 475	cm3/1000s. : + 4.0
	Tolerance
Rack travel in mm : 5.50 Tolerance mm : + 0.10	cm3/1000 strokes : 8.0 Check tolerance
Del. quantity	+ cm3/1000S. : 12.0
cm3/1000 strokes : 26.5	
Tolerance : + 3.0	
Check tolerance	CONTROL LEVER
cm3/1000s. : +- 5.0 Spreed	+ + control lever
Tolerance	position degree : 117.0
cm3/1000 strokes : 4.0 - Check tolerance	tolerance degree : +- 4.0
cm3/1000s, : 8.0	RATED SPEED
	rack travel mm : 9.10
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1315 + Tolerance 1/min : + 15
WITH GOVERNOR	+
	rack travel mm : 4.00 Rated speed rpm : 1400
GUIDE SLEEVE TRAVEL	Tolerance 1/min : +- 5
Rated speed rpm : 1312	rack travel mm : 0.50
guide sleeve : 9.56	Tolerance mm : + 0.50
Tolerance mm : 4.36	Rated speed rpm : 1500
Rated speed rpm : 475 guide sleeve	
travel mm : 1.75	LOW IDLE
Tolerance mm : + 0.20	†
Rated speed rpm : 993 - guide sleeve	control lever position degree : 73.0
travel mm : 6.53	tolerance degree : + 4.0
Tolerance mm : + 0.25	+
Rated speed rpm : 680	Control lever difference Grad : 44.0
guide sleeve travel mm : 3.84	tolerance degree : +- 6.0

Setting point w/c	out bumper spring
Rated speed rpm	: 400
CRT mm min.	: > 6.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 475 : 5.50 : + 0.10
Rated speed rpm	: 550
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1250 : 10.15 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 9.70 : ← 0.20
Rated speed rpm rack travel mm Tolerance mm	: 550 : 9.40 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	
Rated speed rpm Pressure hPa	: 1250 : –
rack travel mm Tolerance mm	9.00 + 0.20
MEASUREMENT	
Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 285 : 10.00 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 200 : 9.40 : ← 0.20
Start interlock	

100 325

Check		
speed 1/min Check	: > 80	
speed 1/min	: < 350	
FUEL DELIVERY CHA	RACTERISTICS	
T		
Aneroid pressure	. 750	
Rated speed rpm	: 350 : 750	
Del. quantity	. 440.5	
cm3/1000 strokes Tolerance	: 110.5	
cm3/1000 strokes	: + 3.0	
Check tolerance cm3/1000s.	: +- 6.0	
Spreed		
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance	. 0.0	
cm3/1000s.	: 12.0	
49-20-0		
rack travel mm	9.40	
Tolerance mm	: + 0.20	
STARTING FUEL DEL	IVERY	
Rated speed rpm	: 100	
Rated speed rpm rack travel mm	: 21.00	
rack travel mm Tolerance mm		
rack travel mm	: 21.00 : + 0.50	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 21.00 : + 0.50 : 176.0	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 21.00 : + 0.50 : 176.0	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 21.00 : + 0.50 : 176.0	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 21.00 : + 0.50 : 176.0 : + 20.0	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 21.00 : + 0.50 : 176.0 : + 20.0	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 21.00 : + 0.50 : 176.0 : + 20.0	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 21.00 : + 0.50 : 176.0 : + 20.0	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm	: 21.00 : + 0.50 : 176.0 : + 20.0 : + 25.0	***************************************
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm	: 21.00 : + 0.50 : 176.0 : + 20.0 : + 25.0	***************************************
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity	: 21.00 : + 0.50 : 176.0 : + 20.0 : + 25.0 : + 25.0 : 475 : 5.50 : + 0.10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 21.00 : + 0.50 : 176.0 : + 20.0 : + 25.0 : 475 : 5.50 : + 0.10 : 26.5	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 21.00 : + 0.50 : 176.0 : + 20.0 : + 25.0 : + 25.0 : 475 : 5.50 : + 0.10	
rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 21.00 : + 0.50 : 176.0 : + 20.0 : + 25.0 : 475 : 5.50 : + 0.10 : 26.5	

Rated speed rpm : > Rated speed rpm : <

Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 23.02.98 : ISO 4113

Combination No.

: 0 402 076 803

Injection pump

Pump designation : PES6P100A320LS3317

EP type number

: 0 412 006 706

Governor

Governer design. : RSV400...1200P5A645

Governer no.

: 0 421 833 558

Cust. part No. : 1825466c91

Customer-spec. information : NAVISTAR Customer Motor : DTA-466 Power KW : 156.0

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. °C

Tolerance °C

: +-2.0

Overflow valve

: 2 477 413 076

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : **←** 1.5

Test lines : 1 680 750 015

Outside diameter: 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.00 : + 0.05Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm: +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 13.45 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 149.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: + 3.0 cm3/1000s.

Spreed	
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
Rated speed rpm	: 400
Rack travel in mm Tolerance mm	5.30 : + 0.10
Del. quantity cm3/1000 strokes	: 23.5
Tolerance cm3/1000 strokes	: ← 2.0
Check tolerance cm3/1000S. Spreed	: +- 4.5
Tolerance cm3/1000 strokes	: 4.0
Check tolerance cm3/1000s.	: 6.5
(B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE POSI	
control lever position degree Rated speed rpm	: ~ 3 : 80 0
Rack travel in mm Tolerance mm	: 0.50 : +- 0.20
governor spring pre-tension click setting x	: 3.75
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure hPa	: 1200 : 1000
Del. quantity cm3/1000 strokes	: 149.5
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s. Spreed	: ← 3.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0 : 12.0
CONTROL LEVER	
control lever position degree tolerance degree	: 103.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	; 12.40 : 1245 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1305 : ← 5
rack travel mm Tolerance mma Rated speed rpm	: 0.85 : + 0.55 : 1400
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1310 : + 15
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	405
	: 100
CRT mm min.	: 100
CRT mm min. Testing:	
	: > 19.00
Testing: Rated speed rpm rack travel mm	: > 19.00 : 400 : 5.30 : + 0.10

Tolerance mm	: ← 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa	: 800 : 1000	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: -	
MEASUREMENT		
Rated speed rpm	: 800	
Pressure hPa rack travel mm Tolerance mm	: 650 : 13.30 : + 0.20	
Pressure hPa rack travel mm Tolerance mm	: 315 : 10.70 : + 0.05	
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure	422	
hPa Rated speed rpm Del. quantity	: 1000 : 800	
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 800 : 171.0	
Rated speed rpm Del. quantity cm3/1000 strokes	: 800 : 171.0	
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ameroid pressure hPa	: 800 : 171.0 : ← 2.0	
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 800 : 171.0 : + 2.0 : + 4.0	
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	 : 800 : 171.0 : + 2.0 : + 4.0 : - 300 : - 300 	
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	 : 800 : 171.0 : + 2.0 : + 4.0 ∴ 500 ∴ 77.0 	

rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 400
Rack travel in mm Tolerance mm Del. quantity	: 5.30 : ← 0.10
cm3/1000 strokes Tolerance	: 23.5
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: +- 4.5
Tolerance cm3/1000 strokes Check tolerance	: 4.0
cm3/1000s.	: 6.5

End of test specification sheet

Rated speed rpm : 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.02.98 Test oil : ISO 4113

Combination No. : 0 402 744 806

Injection pump

Pump designation : PES4P120A320RS7431

EP type number : 0 412 724 805

Governor

Soverner design. : RQV325...1500PA1333

: -1K

Governer no.

: 0 421 815 555

Cust. part No. : 3393633

Customer-spec. information Customer : CDC Motor : 48TA-A Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : **←** 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter:

3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.90 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-3-4-2

: 0-90-180-270 Phasina

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : +- 0.50

Check

tolerance *NW

: + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1500

Rack travel in mm: 15.25

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 206.0	Tolerance mm : + 0.25
Tolerance		Rated speed rpm : 1940 guide sleeve
cm3/1000 strokes	: + 1.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s.	: + 4.0	Toter ance (air . += 0.50
Spreed		FULL LOAD DELIVERY AT FULL LOAD STOP
		Rated speed rpm : 1500
Tolerance cm3/1000 strokes	: 8.0	Aneroid pressure : 1000
Check tolerance		+ Del. quantity + cm3/1000 strokes : 206.0
cm3/1000s.	: 12.0	Tolerance + 1.0
		- Check tolerance
Rated speed rpm	: 325	+ cm3/1000s. : + 4.0 + Spreed
nadi Arrivit I	7.00	† Tolerance
Rack travel in m		+ cm3/1000 strokes : 8.0 + Check tolerance
Tolerance mm Del. quantity	: - 0.10	+ cm3/1000s. : 12.0
cm3/1000 strokes	: 20.0	1
cm3/1000 strokes	: ← 3.0	
Check tolerance		CONTROL LEVER
cm3/1000s. Spreed	: +- 5.0	‡ control lever
Tolerance		position degree : 119.0
cm3/1000 strokes	: 4.0	tolerance degree : + 4.0
Check tolerance cm3/1000s.	: 8.0	T RATED SPEED
CIRC7 100001		+ rack travel mm : 14.25
		+ Rated speed rpm : 1565
(3) SETTING OF IN	NJECTION PUMP	Tolerance 1/min : + 5
		+ rack travel mm : 5.50
		+ Rated speed rpm : 1720
GUIDE SLEEVE TRAN	VEL	+ Tolerance 1/min : + 15
Rated speed rpm	: 1555	rack travel mm : 0.50
guide sleeve		+ Tolerance mm : + 0.50
travel mm Tolerance mm	: 9.37 : +- 0.15	+ Rated speed rpm : 1850
Toterarice min	. += 0.15	Į
Rated speed rpm guide sleeve	: 325	İ
travel mm	: 1.53	+ LOW IDLE
Tolerance mm	: + 0.20	†
Rated speed rpm	: 1007	control lever
guide sleeve	. 5.73	+ position degree : 75.0
travel mm Tolerance mm	: 5.72 : +- 0.25	tolerance degree : + 4.0
TO LET CHILLE HID		T Control lever difference
Rated speed rpm guide sleeve	: 550	Grad : 44.0 + tolerance degree : + 6.0
travel mm	: 3.40	T coterance degree . The o.u

Setting point w/o	out bumper spring	Aneroid pressure	4000
Rated speed rpm	: 275	+ hPa + Rated speed rpm	: 1000 : 1100
CRT man min.	: > 8.10	Del. quantity cm3/1000 strokes	: 193.5
		Tolerance cm3/1000 strokes	
Testing:		→ Check tolerance	
Rated speed rpm	: 325 : 7.80	cm3/1000s. - Spreed	: + 6.0
rack travel mm Tolerance mm	· + 0.10	+ Tolerance	2.2
Rated speed rpm	: 400	cm3/1000 strokes Check tolerance	
-		t cm3/1000s.	: 12.0
TORQUE CONTROL			
Rated speed rpm	: 1500	+ rack travel mm + Tolerance mm	
rack travel mm Tolerance mm	: +- 0.05	Toterance min	: 0.20
Rated speed rpm	: 1100	Aneroid pressure	
Rated speed rpm rack travel mm Tolerance mm	: 14.70	∔ hPa	: -
Tolerance mm	: ← 0.20	Rated speed rpm	: 750
Rated speed rom	• 750	Del. quantity cm3/1000 strokes	• 117.0
Rated speed rpm rack travel mm	: 13.75	+ Tolerance	
Tolerance mm	: +- 0.20	+ cm3/1000 strokes	
		Check tolerance cm3/1000s.	7.0
ANEROID/ALTITUDE COMPENSATOR TEST		T (110003)	. += 5.0
SETTING		STARTING FUEL DEL	LIVERY
		+ Rated speed rpm	: 100
Rated speed rpm	: 1500	+ rack travel mm	11.60
Pressure hPa	•	Tolerance mm Del. quantity	: +- 0.50
Rated speed rpm	: 750	cm3/1000 strokes	: 122.0
Pressure hPa	-	Tolerance	
rack travel mm	: 11.65	+ cm3/1000 strokes	:
Tolerance mm	: + 0.20	+ Check tolerance + cm3/1000s.	· + 25 0
MEASUREMENT		T CIID/ 10003.	. + 25.0
Rated speed rpm	: 1500	Ī	
Pressure hPa	: 570	LOW IDLE	
rack travel mm	: 13.10	+	
Tolerance mm	: +- 0.20	Rated speed rpm	: 325
Pressure hPa		Rack travel in mn	
rack travel mm		Tolerance mm	: + 0.10
Tolerance mm	: +- 0.20	+ Del. quantity + cm3/1000 strokes	: 20.0
		+ Tolerance	. 20.0
			: +- 3.0
FUEL DELIVERY CHA	ARACTERISTICS	+ Check tolerance	
-		+ cm3/1000s. + Spreed	: +- 5.0
		i obi ced	

Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 23.02.98 Edition : 23.02.98
Test oil : ISO 4113

Combination No. : 9 400 030 747AB

Injection pump

Pump designation : PES4A950320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...110DAD0863R

Governer no. : 9 420 034 721

Cust. part No. : 3934149

Customer-spec. information Customer : CDC

Motor

: 4BT3.9

Power KW

: 71.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

temp. "C Tolerance "C

: +-

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5 : ← 1.5

Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.45 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

: +- 1.50 Tolerance mm

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Start of delivery blocking

*NW after s.o.d. : 7.50

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.75

: + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 100.0

Tolerance +	- Tolerance
cm3/1000 strokes : \leftarrow 1.0	- cm3/1000 strokes : +- 1.0
	- Check tolerance
Check tolerance	- cm3/1000s. : + 3.0
cm3/1000s. : +- 3.0	- Spreed
<u> </u>	- Tolerance
Spreed	- cm3/1000 strokes : 4.0
+	- Check tolerance
Tolerance +	- cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	•
	•
Check tolerance	COLUMN LEVEN
cm3/1000s. : 6.5	- CONTROL LEVER
No	- control lever
	- control lever - position degree : 112.0
Rated speed rpm : 475	- tolerance degree : +- 4.0
Nated speed (pin : 4/3	toterance degree . *- 4.0
Rack travel in mm: 5.70	RATED SPEED
Tolerance and : + 0.10	rack travel mm : 10.75
Del. quantity	- Rated speed rpm : 1170
cm3/1000 strokes : 21.5	Tolerance 1/min : + 5
Tolerance	
cm3/1000 strokes : +- 2.0	rack travel mm : 6.00
Check tolerance	- Rated speed rpm : 1240
cm3/1000s. : +- 4.5	- Tolerance 1/min : + 5
Spreed	
Tolerance	- rack travel mm : 0.85
cm3/1000 strokes : 6.0	- Tolerance mm : +- 0.55
Check tolerance +	- Rated speed rpm : 1375
cm3/1000s. : 8.0 +	•
+	rack travel mm : 6.00
†	Rated speed rpm : 1240
(B) SETTING OF INJECTION PUMP	- Tolerance 1/min : +- 15
WITH GOVERNOR +	•
†	•
GUIDE SLEEVE POSITION	LOW IDLE
Golde Sceene Position	COM INCE
I	
control lever	- control lever
position degree : -3	position degree : 87.0
Rated speed rpm : 800	tolerance degree : + 4.0
1	
Rack travel in mm: 0.50	- Control lever difference
Tolerance mm : +- 0.20	- Grad : 25.0
+	tolerance degree : +- 6.0
governor spring	•
pre-tension +	 Setting point w/out bumper spring
click setting x : 3.75	
+	Rated speed rpm : 475
	rack travel mm : 5.20
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10
+	
Rated speed rpm : 1100	Rated speed rpm : 100
Aneroid pressure	
hPa : 1000	- CRT mm min. : > 19.00
Del. quantity	· · · · · · · · · · · · · · · · · · ·
cm3/1000 strokes : 100.0	Testing:

Rated speed rpm rack travel mm Tolerance mm	: +-	475 5.70 0.10

IUNGUE CUNTRUL		
Rated speed rpm	:	1100
rack travel mm	:	11.75
Tolerance mm	; +	-0.05

Rated speed rpm	:	750
rack travel mm	:	12.75
Tolerance mm	: +	- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	750
Pressure hPa	:	1000

Rated speed rpm	:	750
Pressure hPa	:	_
rack travel mm	:	11.00
Tolerance mm	: +	- 0.10

MEASUREMENT

Rated speed rpm : 75

Pressure hPa	:	600
rack travel mm	:	12.70
Tolerance mm	: +	- 0.20

Pressure hPa	:	410
rack travel mm	:	11.80
Tolerance mm	: +-	- 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	1000
Rated speed rpm	:	750
Del. quantity		440.5

cm3/1000 strokes	:	110.5
Tolerance		
cm3/1000 strokes	• +-	2.0

cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	4.0

Aneroid	pressure		
hPa		:	-

Rated speed rpm Del. quantity	:	750
cm3/1000 strokes	:	86.5
Tolerance cm3/1000 strokes	: +-	1.0
Check tolerance	٠ +-	3.0

STARTING FUEL DELIVERY

Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: + 0.50
Del. quantity	
cm3/1000 strokes	: 120.5
Tolerance	
cm3/1000 strokes	: ← 10.0
Check tolerance	
cm3/1000s.	: +- 15.0

LOW IDLE

Rated speed rpm	:	475	
Rack travel in mm Tolerance mm	: +-	5.70 0.10	
Del. quantity cm3/1000 strokes Tolerance	:	21.5	
cm3/1000 strokes Check tolerance	: +-	2.0	
cm3/1000s. Spreed Tolerance	: +-	4.5	
cm3/1000 strokes Check tolerance	:	6.0	
cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.02.98 Test oil : ISO 4113

Combination No. : F 002 AUZ 026

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

6overner design. : R\$V475...1250A00904R

Governer no.

: F 002 A20 220

Cust. part No. : 3930148

Customer-spec. information

Customer : CDC

Motor

: 4BT3.9

Power KW

: 63.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temo. °C

Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : +- 1.0

Tolerance mm : 2.45
Check

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : ← 1.50

Firing order : 1-3-4-2

Phasing Tolerance : 0-90-180-270

Check

: -- 0.50

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50

Tolerance

: +- 0.50

Check

tolerance *NW

: **←** 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.35

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 85.0	+ Aneroid pressure + hPa : -
Tolerance cm3/1000 strokes : + 1.0	+ Del. quantity + cm3/1000 strokes : 85.0 + Tolerance
Check tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. : + 3.0	cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	CONTROL LEVER
	+
Rated speed rpm : 475	tolerance degree : + 4.0
Rack travel in mm : 5.50	+ total and angles
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity	rack travel mm : 9.30
cm3/1000 strokes : 20.5	+ Rated speed rpm : 1325
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	†
Check tolerance	+ rack travel mm : 6.30
cm3/1000s. : + 4.5	+ Rated speed rpm : 1370
Spreed	+ Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : 3.5	The state of the s
cm3/1000 strokes : 3.5 Check tolerance	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
cm3/1000s. : 5.5	+ Tolerance mm : + 0.55 + Rated speed rpm : 1695
URS/ 10003	I Rated speed (pill : 1093
	rack travel mm : 6.30
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1370
WITH GOVERNOR	Tolerance 1/min : +- 15
	‡
GUIDE SLEEVE POSITION	LOW IDLE
	+
control Lever	+
position degree : - 3	+ control lever
Rated speed rpm : 800	+ position degree : 88.5
Dook housed in my a 0.50	tolerance degree : + 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Control lever difference
Tolerance mm : + 0.20	+ Grad : 26.5
governor spring	tolerance degree : + 6.0
pre-tension	T total alice degree . 1 0.0
click setting x : 4.50	Setting point w/out bumper spring
	Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 5.00
I THE WALL THE PRINT IT I THE WALL A IN	+ Tolerance mm : + 0.10
Rated speed rpm : 1250	+
· · · · · · · · · · · · · · · · · · ·	Rated speed rpm : 100

Rated speed rpm : 100

CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mma	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	_
Rated speed rom rack travel mm Tolerance mm	

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm	:		- 750
Del. quantity cm3/1000 strokes Tolerance	:		88.5
cm3/1000 strokes	:	+-	2.0
Check tolerance cm3/1000s.	:	+-	4.0
rack travel mm Tolerance mm	:	4-	10.70

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm	: +-	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:	121.0
cm3/1000 strokes Check tolerance	: +-	10.0
cm3/1000s.	: +-	15.0

LOW IDLE

Rated speed rpm	:		475	
Rack travel in mma Tolerance mma Del. quantity	:	+-	5.50 0.10	
cm3/1000 strokes	:		20.5	
Tolerance cm3/1000 strokes	:	+	2.0	
Check tolerance cm3/1000s.	:	+	4.5	
Spreed Tolerance				
cm3/1000 strokes Check tolerance	:		3.5	
cm3/1000s.	:		5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.02.98 Test oil : ISO 4113

Combination No. : F 002 A0Z 026CA

Injection puno

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1250A0c904R

Governer no. : F 002 A20 220

Cust. part No. : 3934148

Customer-spec. information Customer : CDC Motor : 4BT3.9 Power KW : 63.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.45 Tolerance mm : +- 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270
Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.35

Tolerance mm : + 0.05

Del. quantity	+ Aneroid pressure
cm3/1030 strokes : 85.0	+ hPa : −
	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 85.0
cm3/1000 strokes : + 1.0	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
Check tolerance	- Check tolerance
cm3/1000s. : $+$ 3.0	+ cm3/1000s. : + 3.0
	Spreed
Spreed	+ Tolerance
op. cou	+ cm3/1000 strokes : 3.5
Tolerance	Check tolerance
cm3/1000 strokes : 3.5	+ cm3/1000s. : 6.0
CIRD / 1000 3 CT ONCS . 3.3	I (mo) 10000.
Check tolerance	T
cm3/1000s. : 6.0	T
CHD/10003 0.0	T CONTROL LEVER
	T CONTROL LEVER
	control lever
Rated speed rpm : 475	
ration speed that . 413	
Dool Appeal in many 5 FO	tolerance degree : + 4.0
Rack travel in mm : 5.50 Tolerance mm : + 0.10	T DATES COURS
	+ RATED SPEED
Del. quantity	rack travel mm : 9.30
cm3/1000 strokes : 20.5	+ Rated speed rpm : 1325
Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	†
Check tolerance	+ rack travel mm : 6.30
cm3/1000s. : + 4.5	+ Rated speed rpm : 1370
Spreed	† Tolerance 1/min : + 5
Tolerance	+
cm3/1000 strokes : 3.5	† rack travel mm : 0.85
Check tolerance	Tolerance mm : + 0.55
cm3/1000s. : 5.5	+ Rated speed rpm : 1695
	+
	+ rack travel mm : 6.30
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1370
WITH GOVERNOR	+ Tolerance 1/min : + 15
	1
	+
	+
GUIDE SLEEVE POSITION	+
	+ LOW IDLE
	+
control lever	+
position degree : - 3	+ control lever
Rated speed rpm : 800	position degree : 88.5
	+ tolerance degree : +- 4.0
Rack travel in mm : 0.50	+
Tolerance mm : +- 0.20	+ Control Lever difference
	+ Grad : 26.5
governor spring	+ tolerance degree : + 6.0
pre-tension	+
click setting x : 4.50	Setting point w/out bumper spring
	4
	Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 5.00
- Quadrature - Carrier - C	+ Tolerance mm : +- 0.10
Rated speed rpm : 1250	1
Handa obcoa i biii i i i i i i i i i i i i i i i i	Rated speed rpm : 100
	1 Hacea observation to 100

CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 475 : 5.50 : ← 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1250 : 10.35 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.00 : ← 0.10
Rated speed rom rack travel mma Tolerance mmn	: 950 : 10.70 : ← 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm Del. quantity	: – : 750
cm3/1000 strokes Tolerance	: 88.5
cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000S.	: +- 4.0
rack travel mm Tolerance mm	: 10.70 : + 0.10

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	20.50
Tolerance mm	: +-	0.50
Del. quantity		
cm3/1000 strokes	:	121.0
Tolerance		
cm3/1000 strokes	: +-	10.0
Check tolerance		
cm3/1000s.	: +-	15.0

LOW IDLE			
Rated speed rpm	:	475	
Rack travel in mmn Tolerance mmn Del. quantity	: : +-	5.50 0.10	
cm3/1000 strokes Tolerance	:	20.5	
cm3/1000 strokes Check tolerance	; +-	2.0	
cm3/1000s. Spreed Tolerance	: +-	4.5	
cm3/1000 strokes Check tolerance	:	3.5	
cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23,02.98 Edition Test oil : ISO 4113

Combination No. : F 002 A0Z 041AA

Injection pump

Pump designation : PES6A950320/3RS2881.

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1100A00923R

: F 002 A20 231 Governer no.

: 3934150 Cust. part No.

Customer-spec. information Customer : CDC Motor : 6BT : 75.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temo. °C Tolerance °C : + 2.0

: 2 417 413 093 Overflow valve

Inlet press. bar : : **←** 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 har : **←** 1.5 Tolerance bar

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 : + 1.0 Tolerance bar

Prestroke mm 2.85 : +- 0.05 Tolerance mm

Check

: **←** 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

: +- 0.50 Tolerance Check

tolerance 'NW : **←** 0.75

1 Barrel no.

BASIC SETTING

1100 Rated speed rpm :

Rack travel in mm: 9.00 Tolerance mm : \leftarrow 0.05

		+ Aneroid pro
Del. quantity cm3/1000 strokes	: 70.5	+ hPa + Del. quant
Tolerance cm3/1000 strokes	: + 1.0	_ + cm3/1000 st + Tolerance + cm3/1000 st
Check tolerance cm3/1000s.	: + 3.0	Check toler cm3/1000s.
Spreed		+ Tolerance + cm3/1000 st
Tolerance cm3/1000 strokes	: 3.5	+ Check toler cm3/1000s.
Check tolerance cm3/1000s.	: 6.0	CONTROL LEY
		control lev
Rated speed rpm	: 500	+ position de + tolerance d
Rack travel in mm Tolerance mm	5.00 + 0.10	RATED SPEEL rack trave
Del. quantity cm3/1000 strokes Tolerance	: 18.5	Rated speed Tolerance
cm3/1000 strokes Check tolerance	: +- 2.0	rack trave Rated spee
cm3/1000s.	: +- 4.5	Tolerance
Tolerance cm3/1000 strokes	: 3.5	rack trave Tolerance
Check tolerance cm3/1000s.	: 5.5	Rated spee
(B) SETTING OF IN	JECTION PUMP	+ rack trave + Rated speed + Tolerance
WITH GOVERNOR		+
GUIDE SLEEVE POSI	TION	LOW IDLE
control lever position degree Rated speed rpm	: - 3 : 800	control level position de tolerance de
Rack travel in mm Tolerance mm	: 0.50	Control le
governor spring pre-tension		tolerance of Setting po-
click setting x	: 2.75	Rated speed
FULL LOAD DELIVER	Y AT FULL LOAD STOP	rack travel
	•	1

Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 70.5 : + 1.0 : + 3.0 : 3.5 : 6.0
control lever position degree tolerance degree tolerance degree RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Rated speed rpm Rated speed rpm Rated speed rpm Rated speed rpm Tolerance 1/min rack travel mm Rated speed rpm Rated speed rpm Tolerance 1/min	: 100.0 : + 4.0 : 8.00 : 1165 : + 5 : 4.00 : 1260 : + 5 : 0.85 : + 0.55 : 1400 : 4.00 : 1270 : + 15
LOW IDLE	

control lever
position degree : 84.0
tolerance degree : + 4.0

Control lever difference
Grad : 16.0
tolerance degree : + 6.0

Setting point w/out bumper spring

Rated speed rpm : 500 rack travel mm : 4.50 Tolerance mm : + 0.10

Rated speed rpm : 100

K01

Rated speed rpm : 1100

CRT mm min. : > 19.00 Testing: 500 Rated speed rpm rack travel mm 5.00 : + 0.10Tolerance mm TORQUE CONTROL 1100 Rated speed rpm 9.00 rack travel mm : : +- 0.03 Tolerance no Rated speed rpm 750 rack travel mma 9.60 Tolerance mm : + 0.10FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 750 Rated speed rpm Del. quantity 76.5 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 STARTING FUEL DELIVERY Rated speed rpm 100 20.50 rack travel mm : Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 120.5 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000S. : +- 15.0 LOW IDLE

Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

End of test specification sheet

Rated speed rpm : 500

Rack travel in mm: 5.00
Tolerance mm: + 0.10

Del. quantity

cm3/1000 strokes : 18.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) 1400/...

Edition : 23.02.98 Test oil : ISO 4113

Combination No. : F 002 AUZ 057CA

Injection pump

Pump designation : PES4A95D320/3RS2927 EP type number : F 002 A10 017

Governor

Governer design. : RSV475...1250A0C936R

Governer no. : F 002 A20 241

Cust. part No. : 3934147

Customer-spec. information Customer : CDC : 4BNA3.9 Motor Power KW : 59.7

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0 x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm 2.85 : + 0.05Tolerance mm Check

: + 0.10tolerance mm

Rack travel in mm : 10.50 : + 1.50 Tolerance mm

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

: + 0.50Tolerance Check

tolerance "NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50 Tolerance : + 0.50Check

: ← 0.75 tolerance 'NW

Barrel no. 1

BASIC SETTING

1250 Rated speed rpm :

Rack travel in mm : 10.20 : **←** 0.05 Tolerance mm

Del. quantity +	Aneroid pressure
cm3/1000 strokes : 92.0	hPa : -
	Del. quantity
Tolerance	cm3/1000 strokes : 92.0
cm3/1000 strokes : + 1.0 +	Tolerance
	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : $+$ 3.0	cm3/1000s. : + 3.0
	Spreed
Spreed	Tolerance
	cm3/1000 strokes : 3.5
Tolerance	Check tolerance
cm3/1000 strokes : 3.5	cm3/1000s. : 6.0
Check tolerance	
cm3/1000s. : 6.0	
	CONTROL LEVER
†	and A. La
6 1 1 1 1 1 1 1 1 1 1	control lever
Rated speed rpm : 475	position degree : 93.0
†	tolerance degree : +- 4.0
Rack travel in mm: 5.00	2477
Tolerance mm : + 0.10 +	RATED SPEED
Del. quantity	rack travel mm : 9.20
cm3/1000 strokes : 13.5	Rated speed rpm : 1340
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0 +	
Check tolerance +	rack travel mm : 4.00
cm3/1000s. : + 4.5	Rated speed rpm : 1400
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : + 0.55
Check tolerance +	Rated speed rpm : 1475
cm3/1000s. : 5.5	
†	rack travel mm : 4.00
†	Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR +	
<u>†</u>	
†	
GUIDE SLEEVE POSITION	LOW IDLE
†	
†	and the laws
control lever	control lever
position degree : -3	position degree : 70.0
Rated speed rpm : 800	tolerance degree : +- 4.0
2. 1. 4	0
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : + 0.20	Grad : 23.0
	tolerance degree : +- 6.0
governor spring	Catholic matter to the first transfer
pre-tension +	Setting point w/out bumper spring
click setting x : 3.50	Dahad anad may 175
†	Rated speed rpm : 475
FIRE LOAD DELTUENY AT FIRE LOAD OTOD	rack travel mm : 4.50
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10
P.A. J. annud ann. 4252	Data dama da mara da 400
Rated speed rpm : 1250	Rated speed rpm : 100
+	

CRT man main. : > 19.00

Testing:

Rated speed rpm 475 rack travel mm 5.00 Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm 1250 rack travel mm 10.20 Tolerance ma 0.05

Rated speed rpm 600

STARTING FUEL DELIVERY

Rated speed rpm 100 20.50 rack travel mm Tolerance mm : + 0.50Del. quantity

cm3/1000 strokes :

120.0 Tolerance

cm3/1000 strokes : +- 10.0 Check tolerance

cm3/1000s.: + 15.0

LOW IDLE

Rated speed rpm 475

Rack travel in mm : 5.00 Tolerance mm 0.10 Del. quantity

cm3/1000 strokes : 13.5

Tolerance

cm3/1000 strokes : +-2.0 Check tolerance

cm3/1000s. 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

5.5 cm3/1000s.

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 23.02.98 Test oil : ISO 4113

Combination No. : F 002 A0Z 061

Injection pump

Pump designation : PES4A95D320/3RS2927

EP type number : F 002 A10 017

Governor

Governer design. : RSV475...1100A20941R

Governer no.

: F 002 A20 242

Cust. part No. : 3930143

Customer-spec. information Customer : CDC

: 4BNA3.9 Motor : 54.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : + 1.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 : +- 0.50 Phasing Tolerance

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 9.50

: + 0.50Tolerance

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 10.55

Tolerance mm : \leftarrow 0.05

	rack travel mm : 4.00 Rated speed rpm : 1230
Rated speed rpm : 515	Tolerance 1/min : +- 15
Rack travel in mm : 5.40 Tolerance mm : + 0.20	
Del. quantity cm3/1000 strokes : 13.5 Tolerance	LOW IDLE
<pre>cm3/1000 strokes :</pre>	control lever position degree : 81.0 tolerance degree : + 4.0
Spreed Tolerance cm3/1000 strokes : 3.5	Control lever difference
Check tolerance cm3/1000s. : 5.5	forad : 19.0 tolerance degree : + 6.0
	Setting point w/out bumper sp
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 515 rack travel mm : 4.90 Tolerance mm : +- 0.20
GUIDE SLEEVE POSITION	Rated speed rpm : 100
	CRT mm min. : > 19.00
control lever position degree : - 3	Testing:
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Rated speed rpm : 515 rack travel mm : 5.40 Tolerance mm : + 0.20
governor spring pre-tension click setting x : 3.00	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 10.55 Tolerance mm : + 0.05
CONTROL LEVER	+ Rated speed rpm : 600 + rack travel mm : 10.55 + Tolerance mm : + 0.20
control lever position degree : 100.0 tolerance degree : + 4.0	<u> </u>
RATED SPEED rack travel mm : 9.50 Rated speed rpm : 1155	FUEL DELIVERY CHARACTERISTICS
Tolerance 1/min : +- 5	Aneroid pressure
rack travel mm : 4.00 Rated speed rpm : 1220 Tolerance 1/min : +- 5	Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 82.0
rack travel mm : 0.85	Tolerance cm3/1000 strokes : +- 1.0
Tolerance mm : +- 0.55 Rated speed rpm : 1325	+ Check tolerance + cm3/1000s. : +- 3.0 - Spreed

: 81.0 : + 4.0 ference : 19.0 : + 6.0 it bumper spring : 515 : 4.90 : + 0.20 : 100 : > 19.00 : 515 : 5.40 : + 0.20 : 1100 : 10.55 : + 0.05 : 600 : 10.55 : ← 0.20 ACTERISTICS 600 : 82.0 : +- 1.0 : +- 3.0 Spreed

Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 6.0 STARTING FUEL DELIVERY 100 Rated speed rpm : rack travel mm : 20.50
Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance cm3/1000s.: +- 15.0 LOW IDLE Rated speed rpm : 515 Rack travel in mm: 5.40 Tolerance m : + 0.20 Del. quantity cm3/1000 strokes : 13.5 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance : +- 4.5 cm3/1000s.Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance 5.5 cm3/1000s.End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 16.06.93 : ISO 4113

Combination No. : 0 401 816 714

Injection pump

Pump designation : PE6P12OA7OORS3192-1

EP type number : 0 411 826 803

Governor

6overner design. :

Governer no.

Cust. part No. :

Customer-spec. information

: IVECO-AIFO Customer

Motor

: 8210SRT

40

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. °C

Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm

: +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 13.05

Tolerance mm : + 0.05

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 21.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s.: +-6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.

: 12.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 13.05 Tolerance m : ← 0.05

LOW IDLE

Rated speed rpm : 300

Del. quantity cm3/1000 strokes : 21.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.02.98 Edition : ISO 4113 Test oil

Combination No. : 0 401 876 815

Injection pump

Pump designation : PE6P110A320RS3374 EP type number : 0 411 816 800

Governor

Governer design. : RSV300...900P1A625

Governer no. : 0 421 833 554

Cust. part No. : 11032713

: -P01 v.08/96

Customer-spec. information

Customer : VCE Motor

: TD 63 KFE Power KW : 122.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

: 100 min. L/h Tolerance t/h : + 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : **←** 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 : + 1.0 Test pressure bar : Tolerance bar

Prestroke mm : 2.45 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm: 11.00 : + 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance 'NW : +- 0.75

: 1 Barrel no.

BASIC SETTING		
Rated speed rpm	: 900	
Rack travel in man Tolerance mma	: 14.30 : + 0.05	
Del. quantity cm3/1000 strokes	: 151.0	
Tolerance cm3/1000 strokes	: + 1.0	
Check tolerance cm3/1000%.	: + 3.C	
Spreed		
Tolerance cm3/1000 strokes	: 4.0	
Check tolerance cm3/1000s.	: 7.5	
Rated speed rpm Rack travel in mm		
Tolerance mm Del. quantity	: + 0.10	
cm3/1000 strokes Tolerance	: 26.0	
cm3/1000 strokes Check tolerance	: +- 2.0	
cm3/1000s. Spreed	: +- 4.5	
Tolerance cm3/1000 strokes	: 3.0	
Check tolerance cm3/1000s.	: 6.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR		
GUIDE SLEEVE POSI	TION	
control lever position degree	: - 3	

governor spring pre-tension 4.00 click setting x : FULL LOAD DELIVERY AT FULL LOAD STOP 900 Rated speed rpm Aneroid pressure 1500 hPa Del. quantity cm3/1000 strokes : 151.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : +-3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. 7.5 CONTROL LEVER control lever position degree : 47.0 tolerance degree : +- 4.0 control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED 13.30 rack travel mm Rated speed rpm 930 Tolerance 1/min : +-4.00 rack travel mm Rated speed rpm : : +- 15 Tolerance 1/min rack travel mm 0.85 : + 0.55 Tolerance mm Rated speed rpm : 1150 rack travel mm 4,00 : Rated speed rpm : 1010 Tolerance 1/min : + 15

: +- 0.20

Tolerance mm

LOW IDLE

Rated speed rpm : 800

Rack travel in mm: 0.50

control lever position degree tolerance degree	: 69.0 : + 4.0
control lever position degree tolerance degree	: 19.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.10 : ← 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.60 : + 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 460
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 900 : 14.30 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
_	
Rated speed rpm Fressure hFa rack travel mm Tolerance mm	: 550 : 1500 : 14.30 : + 0.05
Rated speed rpm Fressure hFa rack travel mm	: 1500 : 14.30
Rated speed rpm Fressure hFa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 1500 : 14.30 : + 0.05

580

90

0.25

: 2.70 : + 0.20

: + 0.05

Aneroid pressure			
nPa	:	_ 	
Rated speed rpm Del. quantity	•	550	
cm3/1000 strokes	:	87.0	
Tolerance cm3/1000 strokes	: +-	1.0	
Check tolerance		1.0	
cm3/1000s.	: +-	4.0	
STARTING FUEL DELI	EVERY	···-	
Rated speed rpm	:	100	
rack travel mm	:	11.00	
Tolerance mm	: +	0.30	
Del. quantity		107.0	
cm3/1000 strokes Tolerance	:	105.0	
cm3/1000 strokes	: +-	10.0	
Check tolerance	•	.5.5	
cm3/1000s.	: +-	14.0	
LOW IDLE		· · · · · · · · · · · · · · · · · · ·	
Rated speed rpm	:	300	
Rack travel in mm	:	5.60	
Tolerance mm	: +-	0.10	
Del. quantity cm3/1000 strokes	•	26.0	
Tolerance	•	20.0	
cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.		/ E	
CMS/10008. Spreed	· +-	4.5	
Tolerance			
cm3/1000 strokes	:	3.0	
Check tolerance			
cm3/1000s.		6.0	

End of test specification sheet

Pressure hPa

rack travel mm Tolerance mm

Pressure hPa

Tolerance mm

rack travel mm

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.02.98 : ISO 4113

Combination No. : 0 402 646 680

Injection pump

Pump designation: PE6P120A320RS7447

EP type number : 0 412 626 970

Governor

Governer design. : RQ275/1150PA1361 : 0 421 801 825 Governer no.

Cust. part No. : 1329586

Customer-spec. information

Customer : DAF

: 6S 200-RQ Motor

: 200.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : +- 2.0

Tolerance °C

Overflow valve : 1 417 413 000

Inlet press. bar :

: + 0.1 Tolerance bar

Overflow quantity

min. L/h : 150 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 5.25

Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 11.70

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.70

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.70

Tolerance mm : + 0.05

	∔ guide sleeve
Del. quantity	travel mm : 4.47
cm3/1000 strokes : 178.0	Tolerance mm : + 0.10
Tolerance	Rated speed rpm : 440
cm3/1000 strokes : +- 1.0	guide sleeve
THE TOOL SET ONCES	travel mm : 6.00
Check tolerance	+ Tolerance mm : + 0.10
cm3/1000s. : $+4.0$	
	Rated speed rpm : 1360
Spreed	+ guide sleeve
	† travel mm : 11.50
Tolerance	+ Tolerance mm : +- 0.50
cm3/1000 strokes : 5.0	†
About to Lorenza	CUITAGE OF THE BOOKETON
Check tolerance cm3/1000s. : 9.0	GUIDE SLEEVE POSITION
Cm5/10005. : 9.0	T Rated speed rpm : 500
	+ Rated speed rpm : 500
	Rack travel in mm: 16.00
Rated speed rpm : 275	Tolerance mm : + 0.40
	+
Rack travel in mm : 5.05	<u> </u>
Tolerance mm : + 0.10	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	+
cm3/1000 strokes : 24.0	+ Rated speed rpm : 1000
Tolerance	+ Aneroid pressure
cm3/1000 strokes : + 3.0	+ hPa : 1000
Check tolerance : +- 6.0	
cm3/1000s. : +- 6.0 Spreed	+ cm3/1000 strokes : 178.0 + Tolerance
Tolerance	+ cm3/1000 strokes : + 1.0
cm3/1000 strokes : 8.0	Check tolerance
Check tolerance	+ cm3/1000s. : + 4.0
cm3/1000s. : 12.0	+ Spreed
	+ Tolerance
	+ cm3/1000 strokes : 5.0
(B) SETTING OF INJECTION PUMP	+ Check tolerance
WITH GOVERNOR	+ cm3/1000s. : 9.0
	†
CHITNE CLEEVE TRAVEL	†
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 1205	T CONTINUE FEAR
guide sleeve	control lever
travel mm : 6.49	position degree : 99.0
Tolerance mm : + 0.15	+ tolerance degree : +- 4.0
	+
Rated speed rpm : 275	+ RATED SPEED
guide sleeve	+ rack travel mm : 10.70
travel mm : 1.97	+ Rated speed rpm : 1202
Tolerance mm : + 0.20	Tolerance 1/min : +- 8
Rated speed rpm : 1150	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1280
travel mm : 6.00	Tolerance 1/min : +- 15
Tolerance mm : + 0.10	+
	rack travel mm : 0.70
Rated speed rpm : 356	Tolerance mm : + 0.70
	+ Rated speed rpm : 1450

LOW IDLE

control lever

position degree : 73.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 175

CRT mm min. :> 6.40

Testing:

Rated speed rpm : 275
rack travel mm : 5.05
Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 355
Tolerance 1/min : + 20

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 11.70 Tolerance mm : + 0.05

Rated speed rpm : 1150 rack travel mm : 11.70 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1000
rack travel mm : 11.70
Tolerance mm : + 0.05

Rated speed rpm : 600
Pressure hPa : rack travel mm : 6.70
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 600

Pressure hPa : 220 rack travel mm : 10.50

Tolerance mm : +- 0.05

Pressure hPa : 100 rack travel mm : 8.10 Tolerance mm : + 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure Rated speed rpm 600 Del. quantity cm3/1000 strokes : 101.0 Tolerance cm3/1909 strckes : +-1.0 Check tolerance cm3/1000s.: +-4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

LOW IDLE

Rated speed rpm : 275 Rack travel in mm: 5.05 : + 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 24.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 : +-Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0 :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.02.98 Test oil : ISO 4113

Combination No. : 0 402 746 603

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQ303/1050PA999-7

Governer no. : 0 421 801 799

Cust. part No. : CCEP 5153 66-224

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIHR062045 A41

Power KW : 188.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70
Tolerance mm : + 0.05

Check

tolerance n : \leftarrow 0.10

Rack travel in mm : 20.25
Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

*NW after s.o.d. : -0.50 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm : 12.40 Tolerance mm : + 0.05

BASIC SETTING

Rated speed rpm :	600	+	
•		+ Rated speed rpm : 594	
Tolerance mm :	+- 0.05	+ guide sleeve	
		+ travel mm : 5.11	
Del. quantity		+ Tolerance mm : $+$ 0.10	
cm3/1000 strokes :	195.0	+	
		+ Rated speed rpm : 720	
Tolerance		+ guide sleeve	
cm3/1000 strokes :	← 1.0	+ travel mm : 6.00	
Charl Astronom		+ Tolerance mm : + 0.10	
Check tolerance	+- 4.0	Dated and an 1790	
cm3/1000s. :	7- 4.0	+ Rated speed rpm : 1380 + guide steeve	
Spreed		travel mm : 11.50	
Spr eeu		Tolerance mm : + 0.50	
Tolerance		Total disc nam	
cm3/1000 strokes :	5.0		
		+ GUIDE SLEEVE POSITION	
Check tolerance		+	
cm3/1000s. :	9.0	+	
		+ control lever	
	_	+ position degree : 109	
		+ Rated speed rpm : 800	
Rated speed rpm :	275	†	
		+ Rack travel in mm: 20.00	
Rack travel in mm:	-6.60	+ Tolerance mm : $+$ 0.80	
Tolerance mm :	← 0.10	†	
Del. quantity cm3/1000 strokes :	38.0	+ FULL LOAD DELIVERY AT FULL LO	AD STOR
Tolerance	36.0	T FOLL EDAD DELIVER! AT FOLL LO	אט זוטף
	← 2.0	Rated speed rpm : 600	
Check tolerance	. 2.3	+ Aneroid pressure	
	← 5.0	+ hPa : 1000	
Spreed		- Del. quantity	
Tolerance		+ cm3/1000 strokes : 195.0	
cm3/1000 strokes :	8.0	+ Tolerance	
Check tolerance		+ cm3/1000 strokes : + 1.0	
cm3/1000s. :	12.0	+ Check tolerance	
		+ cm3/1000s. : + 4.0	
(D) 0F===110 A= =111=	CTTOL DIMO	Spreed	
(B) SETTING OF INJE	CIION PUMP	Tolerance	
WITH GOVERNOR		+ cm3/1000 strokes : 5.0 + Check tolerance	
		7/4000-	
GUIDE SLEEVE TRAVEL		+ cm3/1000s. : 9.0	
COTAL OFFICE LIMITE		1	
Rated speed rpm :	1145	+	
guide sleeve		+ CONTROL LEVER	
travel mm :	6.55	+	
Tolerance mm :	← 0.15	+ control lever	
		+ position degree : 276.0	
Rated speed rpm :	275	tolerance degree : + 4.0	
guide sleeve	4 75	T DATES COME	
travel mm :	1.75	+ RATED SPEED	
Tolerance mm :	← 0.20	+ rack travel mm : -1.00	
Datad anced and	1050	Rated speed rpm : 1120 Tolerance 1/min : + 15	
Rated speed rpm :	(050	+ Tolerance 1/min : + 15	
guide sleeve travel mm :	6.00	rack travel mm : -8.40	
Tolerance mm :	+ 0.10	+ Rated speed rpm : 1250	
iviciality in :	. 0.10	I lidited speed (bill . (5)0	

Tolerance 1/min **:** ← 5 rack travel mm : -11.90 Tolerance mm : **←** 0.50 Rated speed rpm : 1375 LOW IDLE control lever position degree : 254.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm 175 CRT mm min. : < -4.70 Testing: Rated speed rpm 275 rack travel mm -6.60: Tolerance mm : + 0.10-10.40rack travel mm Rated speed rpm 475 Tolerance 1/min : +- 50 TORQUE CONTROL Rated speed rpm : 600 : + 0.05 Tolerance mm Rated speed rpm : 1050 Tolerance mm : + 0.10ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rom 500 Pressure hPa 1000 500 Rated speed rpm : Pressure hPa : -1.75rack travel mm : + 0.20Tolerance mm **MEASUREMENT** 500 Rated speed rpm

220

:

rack travel mm : -0.85 Tolerance mm : + 0.15Pressure hPa 160 rack travel mm -1.25Tolerance mm : +- 0.05 Start interlock Rated speed rpm 100 : < Rated speed rpm 195 Check speed 1/min : > 80 Check speed 1/min : < 215 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1000 Rated speed rpm 1050 Del. quantity cm3/1000 strokes : 196.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s.4.0 STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s.: +- 19.0 LOW IDLE

Pressure hPa

Rated speed rpm	:		275
Rack travel in man Tolerance man Del. quantity	• • • •	+-	-6.60 0.10
cm3/1000 strokes Tolerance	:		38.0
cm3/1000 strokes	:	4	2.0
Check tolerance cm3/1000s. Spreed	:	+	5.0
Tolerance cm3/1000 strokes Check tolerance	:		3.0
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 19.02.98 Test oil : ISO 4113

Combination No. : 0 402 746 649

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQ275/1050PA1217 Governer no. : 0 421 801 782

Cust. part No. : CCEP51508 66

: -225/228

Customer-spec. information

Customer : RENAULT V.I.

Motor : MIDR062045 I-B41

Power KW : 185.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 320 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : -1.20 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm : 12.50

Tolerance mm	: 0.05	† guide sleeve
		+ travel mm : 6.00
		——
BASIC SETTING		†
		+ Rated speed rpm : 391
Rated speed rpm	: 600	† guide sleeve
		+ travel mm : 4.37
Del. quantity		Tolerance mm : +- 0.10
cm3/1000 strokes	: 192.0	†
- 1		Rated speed rpm : 490
Tolerance		→ guide sleeve
cm3/1000 strokes	s : +- 1.0	+ travel mm : 6.00
Charle dalamana		+ Tolerance mm : + 0.10
Check tolerance cm3/1000s.		Pohod speed see 47/0
CM3/10008.	: +- 4.0	+ Rated speed rpm : 1340
Conned		fuide sleeve
Spreed		travel mm : 11.50 Tolerance mm : +- 0.50
Tolonopoo		Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes		I
CHEZ/TOOU STROKES	· . 5.0	GUIDE SLEEVE POSITION
Check tolerance		T OOTHE DEFENE LOSTITUM
cm3/1000S.	: 9.0	1
311237 TC 000 E	• /• /	+ control lever
		position degree : 109
		Rated speed rpm : 600
Rated speed rpm	: 275	Tracea speed (pii : 000
may oppose them		Rack travel in mm: 20.00
Rack travel in m	n : -6.80	+ Tolerance mm : + 0.80
Tolerance mm		1
Del. quantity	• • • • • • • • • • • • • • • • • • • •	
cm3/1000 strokes	: 31.0	FULL LOAD DELIVERY AT FULL LOAD STOP
		(
Tolerance	• • •	+
Tolerance cm3/1000 strokes		Rated speed rpm : 600
cm3/1000 strokes		Rated speed rpm : 600 Aneroid pressure hPa : 1000
cm3/1000 strokes Check tolerance	: +- 2.0	Aneroid pressure hPa : 1000 Del. quantity
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 2.0 : +- 5.0	Aneroid pressure
cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 2.0 : +- 5.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: +- 2.0 : +- 5.0 : 8.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +- 2.0 : +- 5.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: +- 2.0 : +- 5.0 : 8.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: +- 2.0 : +- 5.0 : 8.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: +- 2.0 : +- 5.0 : : 8.0 : 12.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0 : : 8.0 : 12.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0 : : 8.0 : 12.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR	: +- 2.0 : +- 5.0 : 8.0 : 12.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0 : 8.0 : 12.0	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA	: +- 2.0 : +- 5.0 : 8.0 : 12.0 : NJECTION PUMP	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA	: +- 2.0 : +- 5.0 : 8.0 : 12.0 : NJECTION PUMP	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve	: +- 2.0 : +- 5.0 : 8.0 : 12.0 ENJECTION PUMP	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve travel mm	: +- 2.0 : +- 5.0 : 8.0 : 12.0 ENJECTION PUMP VEL : 1137 : 6.37	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve	: +- 2.0 : +- 5.0 : 8.0 : 12.0 ENJECTION PUMP	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve travel mm Tolerance mm	: +- 2.0 : +- 5.0 : 8.0 : 12.0 NJECTION PUMP VEL : 1137 : 6.37 : +- 0.10	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 275.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: +- 2.0 : +- 5.0 : 8.0 : 12.0 NJECTION PUMP VEL : 1137 : 6.37 : +- 0.10	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: +- 2.0 : +- 5.0 : 8.0 : 12.0 INJECTION PUMP VEL : 1137 : 6.37 : +- 0.10 : 275	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 275.0 tolerance degree : +- 4.0
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: +- 2.0 : +- 5.0 : 8.0 : 12.0 INJECTION PUMP VEL : 1137 : 6.37 : +- 0.10 : 275 : 1.37	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 275.0 tolerance degree : +- 4.0 RATED SPEED
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: +- 2.0 : +- 5.0 : 8.0 : 12.0 INJECTION PUMP VEL : 1137 : 6.37 : +- 0.10 : 275	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 275.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00
cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF I WITH GOVERNOR GUIDE SLEEVE TRA Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: +- 2.0 : +- 5.0 : 8.0 : 12.0 NJECTION PUMP VEL : 1137 : 6.37 : +- 0.10 : 275 : 1.37 : +- 0.10	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 192.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 275.0 tolerance degree : +- 4.0 RATED SPEED

rack travel mm : -8.50 Rated speed rpm : 1235 Tolerance 1/min : + 15 rack travel mm : -12.00 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE control lever position degree : 252.0 tolerance degree : - 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : < -5.70Testing: : Rated speed rpm 275 rack travel mm : -6.30 : + 0.10Tolerance mm rack travel mm : -10.40 Rated speed rpm : 375 Tolerance 1/min : +- 20 TORQUE CONTROL Rated speed rpm : 600 Rated speed rpm : 1050 : +- 0.10 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 1000 Pressure hPa 500 Rated speed rpm :

Pressure hPa : 320 rack travel mm : -0.70 : + 0.15Tolerance mm : 160 : -1.55 Pressure hPa rack travel mm : + 0.05 Tolerance mm Start interlock Rated speed rpm : > 100 : < Rated speed rpm 195 Check speed 1/min : > 80 Check speed 1/min : < 215 FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1000
Rated speed rpm : 1050
Del. quantity
cm3/1000 strokes : 197.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 148.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : +- 15.0
Check tolerance
cm3/1000s. : +- 19.0

Pressure hPa

Tolerance mm

rack travel mm

Rated speed rpm : 500

-1.90

: + - 0.20

LOW IDLE

Rated speed rpm	:		275	
Rack travel in man	:		-6.80	
Tolerance mm	:	+-	0.10	
Del. quantity				
cm3/1000 strokes	:		31.0	
Tolerance	-			
cm3/1000 strokes	•	+	2.0	
Check tolerance	•	•	2.0	
	_		F 0	
cm3/1000s.		+-	5.0	
Spreed				
Tolerance				
cm3/1000 strokes	:		8.0	
Check tolerance				
cm3/1000s.			12.0	
·	•		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 20.02.98 Test oil : ISO 4113

Combination No. : 0 402 846 077

Injection pump

Pump designation : PE6P120A320RS8043 EP type number : 0 412 826 035

Governor

Governer design. : RQV300...1050PA1247

Governer no. : 0 421 814 163

Cust. part No. : 11031331-P02v.11.96

Customer-spec. information

Customer : VCE

Motor : TD 103 KCE Power KW : 189.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5Tolerance bar : \leftarrow 0.1

Overflow quantity

min. l/h : 205 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.25
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 9.50
Tolerance mm: + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance $^{\bullet}NW$: + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 500	muido el covo
karted speed rpm : 500	- guide sleeve - travelmm : 5.18
	
Rack travel in mm: 12.90	- Tolerance mm : + 0.25
•	F
Tolerance mm : +- 0.05	- Rated speed rpm : 530
	- guide steeve
Del. quantity	- travel mm : 3.11
cm3/1000 strokes : 322.0	Tolerance mm : + 0.25
Tolerance	- Rated speed rpm : 1400
cm3/1000 strokes : + 1.0	- guide sleeve
	- travel mm : 11.50
Check tolerance	- Tolerance mm : + 0.50
cm3/1000s. : +- 4.0	
Spreed	- GUIDE SLEEVE POSITION
opi ccu	L GOIDE SEEEVE OSTITOR
Tolerance	
cm3/1000 strokes : 8.0	- control lover
CMD/1000 Strokes : 0.0	- control lever
Oh a da da la nama	- position degree : - 1
Check tolerance	- Rated speed rpm : 1250
cm3/1000s. : 11.0	
	- Rack travel in mm : 10.50
†	Tolerance mm : +- 2.00
	_
Rated speed rpm : 320	
+	- FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.60	_
Tolerance mm : + 0.10	- Rated speed rpm : 500
Del. quantity	- Aneroid pressure
cm3/1000 strokes : 50.0	- hPa : 1500
Tolerance	- Del. quantity
cm3/1000 strokes : + 2.0	- cm3/1000 strokes : 322.0
Check tolerance	- Tolerance
cm3/1000s. : + 4.5	- cm3/1000 strokes : +- 1.0
Spreed	- Check tolerance
Tolerance	- cm3/1000s. : +- 4.0
cm3/1000 strokes : 5.0	- Spreed
Check tolerance	- Spreed - Tolerance
	- roterance - cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	
7	Check tolerance
(D) OFFITAIO OF THE FOTTON DUMP	- cm3/1000s. : 11.0
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
-	CONTROL L'EUE
Curren Old Street TOALIST	- CONTROL LEVER
GUIDE SLEEVE TRAVEL	•
+	- control lever
Rated speed rpm : 1102	- position degree : 45.0
guide sleeve	tolerance degree : + 4.0
travel mm : 7.80	•
Tolerance mm : + 0.15	- control lever
+	- position degree : 110.0
Rated speed rpm : 320	- tolerance degree : +- 4.0
guide sleeve	
travel mm : 1.34	- RATED SPEED
Tolerance mm : + 0.20	- rack travel mm : 10.80
	- Rated speed rpm : 1090
Rated speed rpm : 802	- Tolerance 1/min : + 5
'	

rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1190 : + 15
rack travel mm Tolerance mma Rated speed rpm	: ← 0.50
-	
LOW IDLE	
control lever position degree tolerance degree	: 82.0 : + 4.0
control lever position degree tolerance degree	: 18.0 : + 4.0
Setting point w/o	
Rated speed rpm	: 220
CRT mm min.	: > 7.40
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 320 : 4.60 : + 0.10
Rated speed rpm	: 380
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.90 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 11.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 720 : 12.10 : + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	

Tolerance mm	: +- 0.05
Rated speed rpm	: 500
Pressure hPa	: 500
rack travel mm	9.50
Tolerance mm	: + 0.20
TO CET CATE COME	0.20
MEASUREMENT	
~	
Rated speed rpm	: 500
Pressure hPa	: 970
rack travel mm	2.90
Tolerance mm	: + 0.20
Pressure hPa	: 230
rack travel mm	: 230 : 0.25
Tolerance mm	: +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1500
Rated speed rpm	: 1050
Del. quantity	
cm3/1000 strokes	
	: 224.0
Tolerance	
Tolerance cm3/1000 strokes	: 224.0 : +- 1.0
Tolerance cm3/1000 strokes Check tolerance	: + 1.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: + 1.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 1.0 : +- 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: + 1.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: + 1.0 : + 4.0 : 10.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 1.0 : +- 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0 : 10.0 : 14.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0 : 10.0 : 14.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0 : 10.0 : 14.0

rack travel mm Tolerance mm	: +-	12.10 - 0.15
Aneroid pressure		
hPa	:	_
Rated speed rpm Del. quantity	:	500
cm3/1000 strokes Tolerance	:	212.0
7 (4000		4.0

cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0

SETTING

Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.90

LOW IDLE

Rated speed rpm	:		320
Rack travel in mm Tolerance mm Del. quantity	:	+-	4.60 0.10
cm3/1000 strokes	:		50.0
Tolerance cm3/1000 strokes	:	+-	2.0
Check tolerance cm3/1000s. Spreed	:	+	4.5
Tolerance cm3/1000 strokes Check tolerance	:		5.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.02.98 Test oil : ISO 4113

Combination No. : 0 402 846 079

Injection pump

Pump designation : PE6P12OA32CRS8051 EP type number : 0 412 826 037

Governor

Governer design. : RQV300...1050PA1141

Governer no. : 0 421 814 091

Cust. part No. : 11031994 P03 v.02.98

Customer—spec. information Customer : VCE

Motor : TD122KFE Power KW : 297.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 145 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.50 Toterance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 9.50
Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no.	: 1	guide sleeve travel mm : 2.04 Tolerance mm : +- 0.20
BASIC SETTING		Rated speed rpm : 1038
DADIC SETTING	Į	guide sleeve
Rated speed rpm	: 700	travel mm : 7.03
		Tolerance mm : +- 0.25
Rack travel in m		Rated speed rpm : 490
Tolerance mm	: ← 0.05 +	guide sleeve
Del. quantity	<u> </u>	travel mm : 4.65 Tolerance mm : +- 0.25
cm3/1000 strokes	: 298.0	10cer ance into . +- 0.25
	+	Rated speed rpm : 1300
Tolerance cm3/1000 strokes		guide sleeve
CMS/ 1000 Strokes	: - 1.0	travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance		1 0100 mm
cm3/1000s.	: + 4.0	OUT AS OF SOME CONTROL
Spreed		GUIDE SLEEVE POSITION
opi eeu	Į	
Tolerance	+	control lever
cm3/1000 strokes	: 8.0 +	position degree : - 1
Check tolerance	†	Rated speed rpm : 1170
cm3/1000s.	: 11.0	Rack travel in mm : 12.20
		Tolerance mm : + 1.30
	+	
Rated speed rpm	. 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Nated Speed / pill	. 32	FOLE LOAD DELIVERY AT FOLE EOAD STOP
Rack travel in m		Rated speed rpm : 700
Tolerance mm	: + 0.10 +	Aneroid pressure
Del. quantity cm3/1000 strokes	. 27.0	hPa : 1500
Tolerance	: 23.0	Del. quantity cm3/1000 strokes : 298.0
cm3/1000 strokes	: ← 3.0 +	Tolerance
Check tolerance		cm3/1000 strokes : + 1.0
cm3/1000s.	: + 6.0	Check tolerance
Spreed Tolerance	İ	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes	: 5.0	Tolerance
Check tolerance		cm3/1000 strokes : 8.0
cm3/1000s.	: 8.0	Check tolerance
	1	cm3/1000s. : 11.0
(B) SETTING OF IN	NJECTION PUMP	
WITH GOVERNOR	+	A AA MAR AA
	<u> </u>	CONTROL LEVER
GUIDE SLEEVE TRAN	VEL T	control lever
	+	position degree : 64.0
Rated speed rpm	: 1131	tolerance degree : +- 4.0
guide sleeve	: 8.63	control lever
Cravel mm Tokerance mm	: 6.03 : ← 0.15	position degree : 122.0
. 10. 30 100 100	+	tolerance degree : +- 4.0
Rated speed rpm	: 325	-

RATED SPEED - rack travel mm : 12.10 -	- Pressure hPa : 1500 - rack travel mm : 14.00 - Tolerance mm : + 0.25
Rated speed rpm : 1120 - Tolerance 1/min : +- 5 -	- Rated speed rpm : 500 - Pressure hPa : -
rack travel mm : 4.00 - Rated speed rpm : 1200 - Tolerance 1/min : + 15 -	rack travel mm : 9.50 Tolerance mm : +- 0.15
rack travel and : 0.50 Tolerance man : + 0.50	- MEASUREMENT - Rated speed rpm : 500
Rated speed rpm : 1280	Pressure hPa : 840 rack travel mm : 2.70 Tolerance mm : +- 0.20
LOW IDLE	Pressure hPa : 290 rack travel mm : 0.25 Tolerance mm : +- 0.05
control lever position degree : 64.0 tolerance degree : + 4.0	Start interlock
control lever	Rated speed rpm : > 100 Rated speed rpm : < 230 Check
Setting point w/out bumper spring	speed 1/min :> 80
Rated speed rpm : 225	speed 1/min : < 250
CRT mm min. : > 6.40	speed 1/min : < 250
· · · · · · · · · · · · · · · · · · ·	
CRT mm min. : > 6.40	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700
CRT mm min. : > 6.40 Testing: Rated speed rpm : 325 rack travel mm : 4.00	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 269.0 Tolerance
CRT mm min. : > 6.40 Testing: Rated speed rpm : 325 rack travel mm : 4.00 Tolerance mm : + 0.10 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 13.10	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed
CRT mm min. :> 6.40 Testing: Rated speed rpm : 325 rack travel mm : 4.00 Tolerance mm :+ 0.10 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 13.10 Tolerance mm :+ 0.05	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 10.0
CRT mm min. : > 6.40 Testing: Rated speed rpm : 325 rack travel mm : 4.00 Tolerance mm : + 0.10 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 13.10	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance
CRT mm min. :> 6.40 Testing: Rated speed rpm : 325 rack travel mm : 4.00 Tolerance mm : + 0.10 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 13.10 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 700 rack travel mm : 12.30	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity
CRT mm min. :> 6.40 Testing: Rated speed rpm : 325 rack travel mm : 4.00 Tolerance mm : + 0.10 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 13.10 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 12.30 Tolerance mm : + 0.15	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 269.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000S. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 700

L03

Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 165.0
Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 4.00 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 0.8

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 19.02.98 Test oil : ISO 4113

Combination No. : 0 402 846 080

Injection pump

Pump designation : PE6P120A320RS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1027K

Governer no. : 0 421 815 311

Cust. part No. : 11031995

: -P02 V.03/97

Customer spec. information

Customer : VCE
Motor : TD122KHE
Power KW : 209.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 150 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.35 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

	† Tolerance mm : ← 0.20
BASIC SETTING	Rated speed rpm : 775 guide sleeve
Rated speed rpm : 800	travel mm : 6.42 Tolerance mm : +- 0.25
Rack travel in mm : 11.80 Tolerance mm : +- 0.05	+ Rated speed rpm : 470 + guide sleeve
Del. quantity cm3/1000 strokes : 231.0	travel mm : 3.79 Tolerance mm : + 0.25
Tolerance	Rated speed rpm : 1370 guide sleeve travel mm : 13.50
cm3/1000 strokes : + 1.0 Check tolerance	travel mm : 13.50 Tolerance mm : + 0.50
cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
\$pre@d	İ
Tolerance cm3/1000 strokes : 8.0	control lever position degree : - 1 Rated speed rpm : 1230
Check tolerance : 11.0	Rack travel in mm : 9.40 Tolerance mm : + 2.50
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 3.90 Tolerance mm: + 0.10	Rated speed rpm : 800 Aneroid pressure
Del. quantity cm3/1000 strokes : 23.0 Tolerance	+ hPa : 1500 + Del. quantity + cm3/1000 strokes : 231.0
cm3/1000 strokes : +- 3.0 Check tolerance	Tolerance : +- 1.0
cm3/1000s. : +- 6.0 Spreed Tolerance	+ Check tolerance + cm3/1000S. : + 4.0 + Spreed
cm3/1000 strokes : 5.0 Check tolerance	Tolerance - cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	Check tolerance cm3/1000S. : 11.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 62.0
Rated speed rpm : 1105 guide sleeve	tolerance degree : +- 4.0
travel mm : 9.77 Tolerance mm : + 0.15	control leverposition degree : 120.0tolerance degree : + 4.0
Rated speed rpm : 300 guide sleeve	RATED SPEED
travel mm : 2.01	+ rack travel mm : 11.00

L06

Rated speed rpm Tolerance 1/min rack travel mm	:
rack travel mm Rated speed rpm Tolerance 1/min	: 1180 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50
LOW IDLE	
control lever position degree tolerance degree	
control lever position degree tolerance degree	: 23.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
CRT mm min.	: > 6.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 3.90 : +- 0.10
Rated speed rpm	: 350
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.80 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.00 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 550 : 12.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 690 : 11.80 : ← 0.15
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.30 : + 0.30

ANEROID/ALTITUDE	
COMPENSATOR TEST	

SETTING

Rated speed rpm	:	550
Pressure hPa	:	1500
rack travel mm	:	12.40
Tolerance man	: -	⊢ 0.10

Rated speed rpm : 550
Pressure hPa : rack travel mm : 10.35
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm	:	550
Pressure hPa	:	600
Pressure hPa	:	60

rack travel mm : 1.65
Tolerance mm : +- 0.20

Pressure hPa : 260 rack travel mm : 0.25 Tolerance mm : ← 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure	: 1500	
Rated speed rpm	: 1050	
Del. quantity		
cm3/1000 strokes	: 219.0	
Tolerance		
cm3/1000 strokes	: + 3.0	
Check tolerance		
cm3/1000s.	: +- 6.0	
Spreed		
Tolerance		
cm3/1000 strokes	: 10.0	
Check tolerance	• • •	
cm3/1000s.	: 14.0	

Aneroid pressure
hPa : 1500
Rated speed rpm : 550
rack travel mm : 12.40
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 285.0
Tolerance
cm3/1000 strokes : + 4.0

Check tolerance cm3/1000s. : +- 6.0

Aneroid pressure

hPa Rated speed rpm 550

Del. quantity cm3/1000 strokes : 208.0

Tolerance

cm3/1000 strokes : +-

Check tolerance

cm3/1000s.4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 : 10.35 rack travel mm : + 0.30 Tolerance mm Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : - 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 3.90 : **←** 0.10 Tolerance mm

Del. quentity

cm3/1000 strokes : 23.0

Tolerance

3.0 cm3/1000 strokes : +-

Check tolerance

cm3/1000s. : +-6.0

Spreed

Tolerance

5.0 cm3/1000 strokes :

Check tolerance

8.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.03.98 Test oil : ISO 4113

Combination No. : 0 400 864 104

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...1250A5c877L

Governer no. : 0 420 232 632

Cust. part No. : 0423 2047 KY

Customer-spec. information Customer : KHD-DMI : BF4L 913 C Motor Power KW : 78.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test Lines : 1 680 750 014

Outside diameter: 6.0

x inside diameter: 2.0 x length man : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.00 Toterance in a : + 0.05 Check : + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasina

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.70 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 92.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

: +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	+ Check tolerance + cm3/1000s. : 8.0
Check tolerance	†
cm3/1000s. : 8.0	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 104.0
	tolerance degree : + 4.0
Rack travel in mm: 8.20	t
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1900 strokes : 11.5	rack travel mm : 11.70 Rated speed rpm : 1295
Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0	Tocci ance many
Check tolerance	rack travel mma : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1355
Spreed	Tolerance 1/min : + 15
Tolerance	†
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance cm3/1000S. : 9.0	Tolerance mm : +- 0.55 Rated speed rpm : 1550
CM3/10005. : 9.0	+ kated speed rpm : 1550 L
	T rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1400
WITH GOVERNOR	Tolerance 1/min : +- 15
	+
	+
	+
GUIDE SLEEVE POSITION	LOU TOLE
GUIDE SLEEVE POSITION	LOW IDLE
	LOW IDLE
control lever	
control lever position degree : FREE	control lever
control lever position degree : FREE Rated speed rpm: : 800	
control lever position degree : FREE Rated speed rpm: : 800 Rack travel in mm : 0.50	control lever position degree : 70.0 tolerance degree : + 4.0
control lever position degree : FREE Rated speed rpm: : 800	control lever position degree : 70.0
control Lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm: : 800 Rack travel in mm: 0.50 Tolerance mm: : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm: : 800 Rack travel in mm: 0.50 Tolerance mm: : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm: : 800 Rack travel in mm: 0.50 Tolerance mm: : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100
control Lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : -	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing:
control Lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
control Lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 325
control Lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
control Lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm: : 800 Rack travel in mm: 0.50 Tolerance mm: : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 1250 Aneroid pressure hPa: - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : + 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 570
control lever position degree : FREE Rated speed rpm: : 800 Rack travel in mm: 0.50 Tolerance mm: : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 1250 Aneroid pressure hPa: - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 570

Rated speed rpm : 1250 : 12.70 rack travel mm : + 0.05 Tolerance ma

500 Rated speed rpm :

STARTING FUEL DELIVERY

Rated speed rom : 1C0 rack travel mm : 20.25 Tolerance mm : **+-** 0.75 Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 8.20 Tolerance mm: + 0.10 Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : -- 2.0 Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance 5.5 cm3/1000 strokes :

Check tolerance

cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.10.97 Test oil : ISO 4113

Combination No. : 0 400 874 254

Injection pump

Pump designation: PES4A95D32ORS2847. EP type number: 0 410 894 990

Governor

Governer design. : RSV375...1200A5C2268

: R

Governer no. : 0 420 233 337

Cust. part No. :

Customer—spec. information Customer : VALMET Motor : 420 DS Power KW : 84.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.55
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-2-4-3

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Beginning of delivery differende

and maximum rack

travel : 9.00
Tolerance mm : + 0.50
Difference * CS : 5.00

BASIC SETTING

Del. quantity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

CONTROL LEVER
+
I control lever
position degree : 104.0 tolerance degree : + 4.0
1
+ RATED SPEED
rack travel mm : 11.50
Rated speed rpm : 1245
+ Tolerance 1/min : + 5
rack travel mm : 4.00
Rated speed rpm : 1325
Tolerance 1/min : + 15
Total and the transfer of the
rack travel mm : 0.85
Tolerance mm : + 0.55 Rated speed rpm : 1425
T raited speed rpm : 1425
rack travel mm : 4.00
Rated speed rpm : 1330
Tolerance 1/min : +- 15
LOW IDLE
1
+ control lever
+ position degree : 73.0
+ tolerance degree : + 4.0
+
Setting point w/out bumper spring
Rated speed rpm : 375
rack travel mm : 4.70 Tolerance mm : + 0.10
+
+ Rated speed rpm : 100
†
+ CRT mm min. : > 19.50
+
+ Testing:
+
Rated speed rpm : 375
+ rack travel mm : 5.20
Tolerance mm : + 0.10
1
+ rack travel mm : 2.00
Rated speed rpm : 475
+ Tolerance 1/min : + 30
1

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 13.20 : ← 0.05 : 1050
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 13.20 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.00 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 350 : 12.40 : ← 0.15
Pressure hPa rack travel mm Tolerance mm	: 440 : 12.90 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 700 : 500
cm3/1000 strokes	: 91.0
cm3/1000 strokes Check tolerance	:
cm3/1000s.	: +- 4.0
rack travel mm Tolerance mm	: 13.00 : + 0.10
Aneroid pressure hPa	: -

Rated speed rpm Del. quantity	:	500
cm3/1000 strokes Tolerance	:	79.0
cm3/1000 strokes Check tolerance	: +	1.0
cm3/1000s. Spreed	: +-	3.0
Tolerance cm3/1000 strokes	:	3.5
Check tolerance cm3/1000s.	:	6.0
STARTING FUEL DEL	.IVERY	,
Rated speed rpm	:	100 20,25

water speed that	•	100
rack travel mm	•	20.25
Del. quantity		
cm3/1000 strokes	:	205.0
Tolerance		
cm3/1000 strokes	: +	- 5.0
Check tolerance		
cm3/1000S.	: +	- 10.0

LOW IDLE	
Rated speed rpm	: 375
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 0.10 : 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01, 10, 97 : ISO 4113

Combination No. : 0 400 876 421

Injection pump

Pump designation : PES6A95D32ORS2848

EP type number : 0 410 896 892

Governor

Governer design. : RSV500...1100A5C2269

Governer no.

: 0 420 233 338

Cust. part No. :

Customer-spec. information

Customer Motor

: VALMET : 634 DS

Power KW

: 140.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C

40

Toterance *C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : **←** 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

2.0

600

x inside diameter:

x Length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Tolerance bar : 26.0

Prestroke mm 2.55 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Beginning of delivery differende

and maximum rack

travel Tolerance mm 10.50 : +- 1.50 : 5.00 Difference * CS :

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 133.0

Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : + 3.0	cm3/1000s. : +- 3.0 Spreed Tolerance
Spreed	cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	CONTROL LEVER
Rated speed rpm : 500	<pre>control lever position degree : 99.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 4.30 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 21.0	RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 4.5 Spreed	rack travel mm : 4.00 Rated speed rpm : 1225 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes: 5.5 Check tolerance cm3/1000s.: 9.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	<pre>control lever position degree : 74.0 tolerance degree : +- 4.0</pre>
control lever position degree : -3 Rated speed rpm : 800	Setting point w/out bumper spring Rated speed rpm : 100
Rack travel in mm : 0.50 Tolerance mm : + 0.20	CRT mm min. : > 19.50
governor spring pre-tension	Testing: Rated speed rpm : 500
click setting x : 3.75	rack travel mm : 4.30 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 530
Rated speed rpm : 1100 + Aneroid pressure + Page 1	Tolerance 1/min : + 30
hPa : - + Del. quantity +	SET IDLE AUXILIARY SPRING
cm3/1000 strokes : 133.0 +	rack travel mm : 2.00

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 14.05 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.60 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 975 : 14.30 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 14.30 : + 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.10 : + 0.05
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 550 : 13.20 : + 0.10
Pressure hPa	. 455
rack travel mm Tolerance mm	: 655 : 13.90 : + 0.05
	: 13.90 : + 0.05
FUEL DELIVERY CHA	: 13.90 : + 0.05
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: 13.90 : + 0.05
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 13.90 : + 0.05 RACTERISTICS : -
FUEL DELIVERY CHA	: 13.90 : + 0.05 RACTERISTICS : 700

rack travel mm Tolerance mm	:	+-	14.30 0.10	
Aneroid pressure hPa Rated speed rpm Del. quantity	:		500	_
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		+	103.0 1.0 3.0	
STARTING FUEL DEL		ERY		
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	•	+-	100 20.25 0.75 205.0 7.5 10.0	
LOW IDLE				
Rated speed rpm	:		500	
Rack travel in mm Tolerance mm Del. quantity		+-	4.30 0.10	
cm3/1000 strokes Tolerance	:		21.0	
cm3/1000 strokes Check tolerance	:	+	3.0	
cm3/1000s. Spreed Tolerance	:	+-	4.5	
cm3/1000 strokes	:		5.5	
Check tolerance cm3/1000s.	:		9.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26.02.98 : ISO 4113

Combination No. : 0 402 076 817

Injection pump

Pump designation : PES6P120A720RS3367

EP type number

: 0 412 026 788

Governor

Governer design. : RSV525...1000P2A640

: -1

Governer no.

: 0 421 833 604

Cust. part No. : RE71286

Customer-spec. information Customer : DEERE : 6081HT001 Motor . : 186.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 457 413 010

Inlet press. bar : : ← 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

17.0 Test pressure bar : Tolerance bar $: \leftarrow 1.0$

Prestroke mm 3.60 : **←** 0.05 Tolerance mm

Check

: **←** 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.50 : +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel 14.00 Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 13.20 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000
Del. quantity cm3/1000 strokes : 179.5	Aneroid pressure hPa : 1400
Tolerance cm3/1000 strokes : + 1.0	Del. quantity cm3/1000 strokes : 179.5 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : + 3.0	Check tolerance cm3/1000s. : +- 3.0
Spreed	Spreed Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVER
	CONTROL LEVER
Rated speed rpm : 525	control lever position degree : 87.5 tolerance degree : + 4.0
Rack travel in mm : 5.10 + Tolerance mm : + 0.10 + Del. quantity	RATED SPEED rack travel mm : 12.20
cm3/1000 strokes : 26.5	Rated speed rpm : 1065 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 +- Check tolerance cm3/1000s. : +- 4.5 +- 4.5	rack travel mm : 4.00 Rated speed rpm : 1115
Spreed Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : 6.0 + Check tolerance cm3/1000s. : 8.0 + Check tolerance cm3/1000s.	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1200
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00 Rated speed rpm : 1120
WITH GOVERNOR	Tolerance 1/min : + 15
GUIDE SLEEVE POSITION	
†	LOW IDLE
control lever position degree : - 3	control lever
Rated speed rpm : 800	position degree : 70.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	Setting point w/out bumper spring
governor spring pre-tension click setting x : 2.50	Rated speed rpm : 525 rack travel mm : 4.30 Tolerance mm : + 0.10
terick secting x . 2.30	10terance min . + U. U

Rated speed rpm	: 100
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 525 : 5.10 : + 0.10
TORQUE CONTROL Rated speed rom rack travel mm Tolerance mm	: 1000 : 13.20 : + 0.05
Rated speed rpm rack travel mm Tolerance msm	: 700 : 14.00 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1400
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 12.25 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 975 : 13.40 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 830 : 12.70 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	

Check tolerance cm3/1000s.	: + 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 500
cm3/1000 strokes Tolerance	: 165.0
cm3/1000 strokes	: + 2.0
Check tolerance cm3/1000s.	: ← 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.50 : + 0.50
Del. quantity cm3/1000 strokes	: 105.0
Tolerance cm3/1000 strokes	: + 20.0
Check tolerance cm3/1000s.	: + 25.0
LOUI TOLE	
LOW IDLE	
Rated speed rpm	
Rack travel in mm Tolerance mm Del. quantity	: 5.10 : + 0.10
cm3/1000 strokes Tolerance	: 26.5
cm3/1000 strokes	: ← 2.0
Check tolerance cm3/1000s. Spreed	: +- 4.5
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 8.0
	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 03.03.98 Edition Test oil : ISO 4113

Combination No. : 0 402 016 708

Injection pump

Pump designation : PES6P120B300RS3393

EP type number : 0 412 026 805

Governor

Governer design. : Governer no.

Cust. part No. : 3827028 P01 v.11.97

Customer-spec. information Customer : PENTA Motor : TAD 740 G : 259.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance *C : +- 2.0

Overflow valve : 2 417 413 077

2.5 Inlet press. bar : Tolerance bar : + 0.1

Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

: 3.55 : + 0.05 Prestroke mm Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm: 12.50 Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.50 Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes :	232.0
Tolerance cm3/1000 strokes : +-	1.0
Check tolerance cm3/1000s. : +-	4.0
Spreed	
Tolerance cm3/1000 strokes :	7.0
Check tolerance cm3/1000s. :	11.0
Rated speed rpm :	300
Rack travel in mm : Tolerance mm : +-	4.40 0.30
Del. quantity cm3/1000 strokes :	30.0
Tolerance cm3/1000 strokes : +-	3.0
Check tolerance cm3/1000s. : +-	6.0
Spreed Tolerance	
cm3/1000 strokes : Check tolerance	5.0
cm3/1000s. :	8.0
(B) SETTING OF INJECTI WITH GOVERNOR	ON PUMP
FULL LOAD DELIVERY AT	FULL LOAD STOP
Rated speed rpm : Aneroid pressure	700
hPa :	-
Del. quantity cm3/1000 strokes :	232.0

1.0

7.0

11.0

: +- 4.0

Testing:			
Rated speed rpm rack travel mm Tolerance mm	: : +	300 4.40 0.30	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: +-	709 12.50 0.10	
LOW IDLE	•	-	
LOW IDLE Rated speed rpm	0 0	300	
Rated speed rpm Rack travel in mm Tolerance mm		300 4.40 0.30	arianista esta variani
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	:	4.40	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: +-	4.40 0.30	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: : +-	4.40 0.30 30.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- : +-	4.40 0.30 30.0 3.0	

End of test specification sheet

Tolerance

Spreed

cm3/1000 strokes : +-

Tolerance cm3/1000 strokes :

Check tolerance cm3/1000s.

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 27.02.98 Test oil : ISO 4113

Combination No. : 0 402 046 850

Injection pump

Pump designation : PES6P120A320RS3320 EP type number : 0 412 026 763

Governor

Governer design. : RQV275...1000PA995

: -2

Governer no. : 0 421 813 940

Cust. part No. : CCEP-5134 66-211

Customer-spec. information

Customer : RENAULT V.I.

Motor : MIDR 06354G M/3

Power KW : 236.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.40
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 19.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm: 12.50

Tolerance non	: ← 0.05	- guide sleeve
	-	- travel mm : 6.09
DAGTA OFFITAIC		- Tolerance mm : + 0.20
BASIC SETTING]	- - Rated speed rpm : 343
Rated speed rpm	: 600	- quide sleeve
	-	guide sleeve travel mm : 2.33
Del. quantity	-	- Tolerance mm : $+$ 0.20
cm3/1000 strokes	: 240.0	-
		- Rated speed rpm : 393
Tolerance	1	guide sleeve
cm3/1000 strokes	: - 1.0	travel mm : 2.99 Tolerance mm : +- 0.20
heck tolerance		i toterance in : *- 0.20
cm3/1990s.	: +- 4.0	Rated speed rpm : 490
Spreed	- Sulv	- guide steeve - travel mm : 3.81 - Tolerance mm : +- 0.20
•	-	- Tolerance mm : + 0.20
Tolerance		•
m3/1000 strokes	: 5.0	- Rated speed rpm : 1370
		- guide sleeve
Check tolerance		guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
cm3/1000s.	: 9.0	- loterance mm : +- 0.50
Introd annual man	. 700	- GUIDE SLEEVE POSITION
Rated speed rpm	: 300	•
Rack travel in mm	.: -7.40	- - control lever
Tolerance am		- position degree : - 1
Del. quantity		- Rated speed rpm : 1180
cm3/1000 strokes	: 25.0	
Tolerance	-	- Rack travel in mm : 11.40
m3/1000 strokes		- Tolerance mm : ← 1.30
heck tolerance		-
m3/1000s.	: ← 5.0	
Spreed	1	- FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes	: 8.0	- Pated speed now 400
heck tolerance	. 0.0	- Rated speed rpm : 600 - Aneroid pressure
m3/1 00 0s.	: 12.0	- hPa : 1000
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		- Del. quantity
	4	- cm3/1000 strokes : 240.0
(B) SETTING OF IN	JECTION PUMP	- Tolerance
ITH GOVERNOR	-	- cm3/1000 strokes : $+$ 1.0
	+	- Check tolerance
		- cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAV	EL -	- Spreed
	. 109/	- Tolerance
Rated speed rpm	: 1086	- cm3/1000 strokes : 5.0 - Check tolerance
guide sleeve	1	
traval me	• 8 /k	. cm3/10005 + 0.0
	: 8.46 : + 0.10	- cm3/1000s. : 9.0 -
Tolerance mm	: + 0.10	- cm3/10UUS. : 9.0
Tolerance man Rated speed rpm		
Tolerance mm Rated speed rpm guide sleeve	: ← 0.10 : 300	- cm3/1000S. : 9.0
Tolerance mm Rated speed rpm guide sleeve travel mm	: ← 0.10 : 300 : 1.66	- CONTROL LEVER
travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: ← 0.10 : 300	

		+ Tolerance mm	: + 0.20
RATED SPEED		+	
rack travel mm	: -1.00	+ MEASUREMENT	
Rated speed rpm Tolerance 1/min		Rated speed r	sa • 5∩∩
10001 0000 17.0011	• •	+	
rack travel mm	: -8.50	+ Pressure hPa	: 160 : -1.70
Rated speed rpm	: 1195	+ rack travel m	n : -1.70
Tolerance 1/min	: +- 15	† Tolerance mm	: ← 0.10
rack travel mm	: -12.00	Pressure hPa	: 280
Tolerance mm	: ← 0.55	+ rack travel m	: 280 n : −0.75 : ← 0.05
Rated speed rpm	: 1350	+ Tolerance am	: ← 0.05
		†	
		Start interlo	:k
	·	- +	
LOW IDLE		+ Rated speed ru	om:> 100 om::< 195
		+ Rated speed r	on: < 195
control lever		T Check	
position degree	: 248.0		: > 80
tolerance degree		Check	• • • • • • • • • • • • • • • • • • • •
		+ speed 1/min	: < 215
Testing:		†	
Rated speed row	• 300	T FILE DELTAGEN	CHARACTERISTICS
rack travel mm	: -7.40	T TOLE DELIVERY	CHARACTERISTICS
Rated speed rpm rack travel mm Tolerance mm	: +- 0.10		
		+ Aneroid pressu	
Rated speed rpm	: 200	+ hPa	: 1000
CRT mm mex.	: < -5.90	Rated speed rule Pol. quantity	om: 1000
CAT THE PROA.	. \ -5.70	- cm3/1000 strok	kes : 228.0
Rated speed rpm	: 365	Tolerance	
• • • • • • • • • • • • • • • • • • • •			kes : +- 3.0
		- + Check tolerand	
TORQUE CONTROL Rated speed rpm	: 600	+ cm3/1000s.	: +- 6.0
kateu speed rpm	: 600	I	
Rated speed rpm	: 1000	+ Aneroid pressu	ıre
Tolerance mm	: ← 0.10	+ hPa	: 1000
Section 1	400	+ Rated speed r	
Rated speed rpm	: 600 : -4.00	+ rack travel mm	
rack travel mm Tolerance mm	: -4.00 : ← 0.10	+ Tolerance mm + Del. quantity	
rotor arroc limit	5.10	+ cm3/1000 strok	
		- Tolerance	
ANEROID/ALTITUDE		+ cm3/1000 strok	
COMPENSATOR TEST		- Check tolerand	
		+ cm3/1000s. + Spreed	: +- 8.0
SETTING		Tolerance	
		+ cm3/1000 strok	kes : 10.0
Rated speed rpm	: 500	+ Check tolerand	ce
Pressure hPa	: 1000	+ cm3/1000s.	: 14.0
Rated speed rpm	: 500	İ	
Pressure hPa	: -	Aneroid pressu	ıre
rack travel mm	· : -2.25	+ hPa	· -
. =		•	

Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 154.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance : + 19.0 cm3/1000s. LOW IDLE Rated speed rpm : 300 -7.40Rack travel in mm: Tolerance m: $\leftarrow 0.10$ Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance : **←** 5.0 cm3/1000s.Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.02.98 Edition Test oil : ISO 4113

Combination No. : 0 402 046 865

Injection pump

Pump designation : PES6P120A320LS3321 .

: -1

EP type number : 0 412 026 776

Governor

Governer design. : RQ275/950PA1085-1 Governer no. : 0 421 801 761

Cust. part No. : 645 625

Customer-spec. information : RABA Customer

Motor : SIEHE BEMERKUNG

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : ← 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 4.45 Prestroke mm : +- 0.05 Tolerance mm Check

tolerance mm : **←** 0.10

Rack travel in mm: 12.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 14.60 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 193.0	† Tolerance mm : + 0.10
Tolerance		Rated speed rpm : 440 guide sleeve
cm3/1000 strokes	: + 1.0	travel mm : 6.00 Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: 4 4.0	Rated speed rpm : 1170
Spreed		guide sleeve travel mm : 11.50
Tolerance		Tolerance mm : +- 0.50
cm3/1000 strokes	: 5.0	GUIDE SLEEVE POSITION
Check tolerance		Solve Seleve rootrion
cm3/1000s.	: 9.0	t control lever
		† position degree : 109
		+ Rated speed rpm : 500
Rated speed rpm	: 275	+
	5 70	+ Rack travel in mm: 20.00
Rack travel in mm		† Tolerance mm : + 0.80
Tolerance mm	: +- 0.10	+
Del. quantity		+
cm3/1000 strokes	: 24.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	. 7.0	†
cm3/1000 strokes	: +- 3.0	+ Rated speed rpm : 600
Check tolerance		+ Aneroid pressure
cm3/1000s.	: ← 6.0	h?a : 900
Spreed		+ Del. quantity
Tolerance cm3/1000 strokes	. • •	+ cm3/1000 strokes : 193.0
Check tolerance	: 0.0	+ Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000s.	: 12.0	+ Check tolerance
CIRS/ 10005.	: 12.0	cm3/1000s. : +- 40
		+ Spreed
(B) SETTING OF IN	LIECTTON PIMP	Tolerance
WITH GOVERNOR	NECTION TOTAL	- cm3/1000 strokes : 5.0
WITH GOVERNOR		+ Check tolerance
		+ cm3/1000s. : 9.0
GUIDE SLEEVE TRAV	/EI	
GOIDE OFFERE HAV		+
Rated speed rpm	: 1003	
guide sleeve	. ==	+ CONTROL LEVER
travel mm	: 6.55	†
Tolerance mm	: ← 0.10	+ control lever
	077	+ position degree : 37.0
Rated speed rpm	: 275	tolerance degree : +- 4.0
guide sleeve	2.05	†
travel mm	: 2.85	+ control lever
Tolerance mm	: +- 0.10	position degree : 99.0
Dodood anna I	• 050	tolerance degree : + 4.0
Rated speed rpm	: 950	T DATED SPEED
guide sleeve	. 400	+ RATED SPEED
travel mm	: 6.00	+ rack travel mm : 13.60
Tolerance mm	: ← 0.10	+ Rated speed rpm : 995 + Tolerance 1/min : +- 5
Dated asset	: 369	† Tolerance 1/min : +- 5
Rated speed rpm	. 307	rack travel mm : 4.00
guide sleeve travel mm	: 5.24	
Cravel mm	: 5.24	+ Rated speed rpm : 1090

Tolerance 1/min : + 15rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1200 LOW IDLE control Lever position degree : 75.0 tolerance degree : + 4.0 control lever position degree : tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 175 CRT mm min. : > 8.30 Testing: 275 Rated speed rpm : rack travel mm : 5.70 : + 0.10 Tolerance mm rack travel mm : 2.00 Rated speed rpm : 355 Tolerance 1/min : +- 20 TORQUE CONTROL Rated speed rpm : 600 rack travel mm : 14.60 : + 0.05Tolerance mm 950 Rated speed rpm : rack travel mm : 14.60 : + - 0.10Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa 900

14.60

500

: + 0.05

rack travel mm : 12.40 Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 240 rack travel mm : 13.10 Tolerance mm : + 0.15

Pressure hPa : 350 rack travel mm : 13.80 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 900
Rated speed rpm : 950
Del. quantity

cm3/1909 strokes : 185.0 Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure hPa :

Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 114.0 Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 154.0 Tolerance

cm3/1000 strokes : +- 20.0
Check tolerance

cm3/1000s. : +- 24.0

rack travel mm

Rated speed rpm :

Tolerance mm

Pressure hPa

LOW IDLE

Rated speed rpm	:	275
Rack travel in mm	:	5.70 - 3.10
Tolerance mm Del. quantity	; +-	- ย.:บ
cm3/1000 strokes Tolerance	•	24.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s.	: +-	- 6.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil · 18.02.97 : ISO 4113

Combination No. : 0 402 046 868

Injection pump

Pump designation : PES6P110A320RS3349

EP type number : 0 412 016 753

Governor

Governer design. : RQV350...1400PA1267K

Governer no. : 0 421 815 503

Cust. part No. : 16700-D8810

Customer-spec. information

Customer : NMI Motor : M 3.6 TI L

Power KW

: 117.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar :

1.5

Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 100 Tolerance L/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar

: + 1.5

M03

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter:

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.55

Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 12.50

Tolerance mm : + 0.05

	∔ guide sleeve
Del. quantity	+ travel mm : 3.96
cm3/1000 strokes : 134.0	Tolerance mm : + 0.25
	†
Tolerance	+ Rated speed rpm : 1730
cm3/1000 strokes : +- 1.0	+ guide sleeve
•	+ travel mm : 13.50
Check tolerance	+ Tolerance mm : $+$ 0.50
cm3/1000s, : +- 3.0	1
3.0	
Spreed	GUIDE SLEEVE POSITION
Spreed	A POTDE STEENE LOSTITON
Talana	Ť
Tolerance	†
cm3/1000 strokes : 5.0	+ control lever
	+ position degree : - 1
Check tolerance	+ Rated speed rpm : 1545
cm3/1000s. : 9.0	+
	+ Rack travel in mm : 11.50
	+ Tolerance mm : + 2.00
	1 roter diffe min
Rated speed rpm : 350	T
Rated speed rpm : 350	FILL LOAD OF THEM AT THE LOAD OFF
	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 9.50	†
Tolerance mm : + 0.10	+ Rated speed rpm : 1300
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 28.0	+ hPa : -
Tolerance	+ Del. quantity
cm3/1000 strokes : + 2.5	+ cm3/1000 strokes : 134.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 5.0	+ cm3/1000 strokes : +- 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. : + 3.0
cm3/1000 strokes : 6.8	+ Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 10.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance
	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	1
WITH GOVERNOR	T
MITH GOVERNOR	T
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	†
	+ control lever
Rated speed rpm : 1421	position degree : 64.0
guide sleeve	+ tolerance degree : +- 4.0
travel mm : 10.03	+
Tolerance mm : + 0.15	+ control lever
rotor direct many Ot 15	position degree : 122.0
Rated speed rpm : 350	
The second secon	tolerance degree : +- 4.0
guide sleeve	T DATES OFFE
travel mm : 1.46	+ RATED SPEED
Tolerance mm : + 0.20	+ rack travel mm : 11.50
	+ Rated speed rpm : 1410
Rated speed rpm : 996	+ Tolerance 1/min ·: + 5
guide sleeve	1
travel mm : 6.78	rack travel mm : 4.00
Tolerance mm : +- 0.25	Rated speed rpm : 1540
	+ Tolerance 1/min : +- 15
Dated amond mm . 440	T local affice 1/mill : T 13
Rated speed rpm : 610	T
	+ rack travel mm : 0.50

Tolerance mm Rated speed rpm	: ← 0.50 : 1640	Aneroid pressure
A A-100		→ hPa : -
		+ Rated speed rpm : 780
		<pre>Del. quantity</pre>
AL TO -		+ cm3/1000 strokes : 118.0
OW IDLE		+ Tolerance
		+ cm3/1000 strokes : + 2.0
control lever		+ Check tolerance + cm3/1000s. : + 5.0
osition degree	: 83.0	+ Spreed
colerance degree		Tolerance
		- cm3/1000 strokes : 12.0
control lever		+ Check tolerance
osition degree		+ cm3/1000s. : 16.0
colerance degree		+
		+
Setting point w/o	ut bumper spring	+ Aneroid pressure
والمستقد المستقدة	. 250	+ hPa : -
ated speed rpm	: 250	+ Rated speed rom : 1000
RT mm min.	. > 10 50	+ rack travel mm : 11.70
,KI MA MITA.	. / 10.30	+ Tolerance mm : + 0.20
esting:		+ Del. quantity + cm3/1000 strokes : 121.0
car nig:		+ Tolerance
Rated speed rom	: 350	+ roterance + cm3/1000 strokes : + 3.0
ack travel mm	: 9.50	+ Check tolerance
olerance mm	: + 0.10	cm3/1000s. : + 6.0
OLDI GI ICO IIII	0.10	- 0.0
ated speed rpm	: 400	1
pro * pro -		+
		+ STARTING FUEL DELIVERY
TORQUE CONTROL		+
Rated speed rpm		+ Rated speed rpm : 100
rack travel mm		+ Del. quantity
rolerance mm	: 0.05	
	700	+ Tolerance
Rated speed rpm	: 780	+ cm3/1000 strokes : + 20.0
rack travel mm	: 11.95	+ Check tolerance
Folerance mm	: + 0.05	+ cm3/1000s. : $+$ 25.0
lated asked ass	. 2000	†
Rated speed rpm rack travel mm		Ī
olerance mm		I
oterante mm		LOW IDLE
		+
		Rated speed rpm : 350
Start interlock		+
	_	+ Rack travel in mm: 9.50
Rated speed rpm	: < 200	+ Tolerance mm : +- 0.10
Rated speed rpm	: > 250	+ Del. quantity
		+ cm3/1000 strokes : 28.0
heck	. 400	+ Tolerance
peed 1/min	: < 180	+ cm3/1000 strokes : + 2.5
heck		+ Check tolerance
peed 1/min	: > 270	+ cm3/1000s. : +- 5.0
		+ Spreed
		+ Tolerance
UEL DELIVERY CHA		- cm3/1000 strokes : 6.0

Check tolerance cm3/1000s.	•	10.0	
End of test speci	ificat	ion sheet	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.03.98 : ISO 4113

Combination No. : 0 402 066 704

Injection pump

Pump designation : PES6P120A120RS3358 .

EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1250P2A613

Governer no. : 0 421 833 501

Cust. part No. : 3927359

Customer-spec. information

Customer : CDC

Motor

: 6BTA-590 ELITE

Power KW

: 149.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50

: +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.75

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.45

Tolerance mm : \leftarrow 0.05 +	Tolerance
+	cm3/1000 strokes : +- 1.0
Tolerance + 1.0 +	Check tolerance
cms/1000 strokes : + 1.0 +	cm3/1000s. : + 3.0
Check tolerance	Spreed
cm3/1000s. : +- 3.0	Tolerance cm3/1000 strokes : 4.0
tm3/10003 += 3.0	Check tolerance
Spreed	cm3/1000s. : 7.5
1	CRO/ 10000: . / . /
Tolerance	
cm3/1000 strokes : 4.0	
	CONTROL LEVER
Check tolerance	
cm3/1000s. : 7.5	control lever
	position degree : 108.0
†	tolerance degree : + 4.0
Rated speed rpm : 475	RATED SPEED
Tured speed this . 415	rack travel mm : 11.45
Rack travel in mm: 5.50	Rated speed rpm : 1305
Tolerance mm : + 0.10	Tolerance 1/min : + 5
Del. quantity	
cm3/1000 strokes : 22.0	rack travel mm : 4.00
Tolerance +	Rated speed rpm : 1415
cm3/1000 strokes : \leftarrow 2.0	Tolerance 1/min : + 15
Check tolerance +	
cm3/1000s. : + 4.5 +	rack travel mm : 0.85
Spreed	Tolerance mm : + 0.55
Tolerance + cm3/1000 strokes : 6.0 +	Rated speed rpm : 1530
Check tolerance	
cm3/1000s. : 9.0	
+	LOW IDLE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	
†	control lever
†	position degree : 84.0
CUIDE CUEDE DOCUTION	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION +	Sotting point Worth human apping
Ĭ	Setting point w/out bumper spring
control lever	Rated speed rpm : 475
position degree : -3	rack travel mm : 5.00
Rated speed rpm : 800	Tolerance mm : + 0.10
+	
Rack travel in mm: 0.50	Testing:
Tolerance mm : +- 0.20 +	
. +	Rated speed rpm : 475
governor spring +	rack travel mm : 5.50 Tolerance mm : +- 0.10
pre-tension +	Tolerance mm : +- 0.10
click setting x : 3.75	rack travel mm : 2.00
<u></u>	Rated speed rpm : 600
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : + 30
TODA CONTRACTOR AT TOTAL CONTRACTOR	TO COLORIDO TAMENTA E COLORIDA DE COLORIDA
Rated speed rpm : 1250 +	
Aneroid pressure +	TORQUE CONTROL
hPa : 1500 +	Rated speed rpm : 1250
•	

rack travel mm : 12.45 Tolerance mm : + 0.05

Rated speed rpm : 750
rack travel mm : 12.45
Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 12.45
Tolerance mm : + 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 9.50
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 900 rack travel mm : 11.50 Tolerance mm : + 0.20

Pressure hPa : 575
Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500
Rated speed rpm : 750
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance

cm3/1000 strokes : 12.0 Check tolerance cm3/1000s. : 16.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm3/1000 strokes : 165.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s : + 25.0

LOW IDLE

Rated speed rpm : 475 5.50 Rack travel in mm : : + 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-4.5 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 02,03,98 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 681

Injection pump

Pump designation : PE6P120A320RS7412 ... EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1331K

: 0 421 815 561 Governer no.

Cust. part No. : 1349846/0

Customer-spec. information : DAF Customer : XF 250 Motor : 250.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance *C 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 : **←** 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 4.45 Tolerance mm : + 0.05

Rack travel in mm : 11.50 Tolerance mm : + 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : ← 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance *NW : **←** 0.70

Barrel no. : 1

BASIC SETTING

980 Rated speed rpm :

Rack travel in mm: 11.50 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : +- 1.0

M10

		+ Tolerance mm	: +- 0.25
Check tolerance cm3/1000s.	: ← 5.0	Rated speed rpm	
Spreed			: 13.50 : + 0.50
Tolerance cm3/1000 strokes	: 8.0	ļ	
Check tolerance			TITON
cm3/1000s.	: 13.0	Rated speed rpm	: 1263
Rated speed rpm	: 275	Rack travel in m Tolerance mm	
Rack travel in m		FULL LOAD DELIVE	RY AT FULL LO
Tolerance mm	: ← 0.10	+ Bottod annual annu	. 000
Del. quantity cm3/1000 strokes	: 17.0	+ Rated speed rpm - Aneroid pressure	
Tolerance		+ hPa	: 1500
cm3/1000 strokes Check tolerance	: 	+ Del. quantity + cm3/1000 strokes	: 250.0
cm3/1000s.	: ← 6.0	+ Tolerance	. 20.0
Spreed		cm3/1000 strokes	
Tolerance cm3/1000 strokes	: 6.0	+ Check tolerance cm3/1000s.	
Check tolerance		Spreed	• • • • • • • • • • • • • • • • • • • •
cm3/1000s.	: 12.0	+ Tolerance + cm3/1000 strokes	: 8.0
(0) 0000000	LITETTON DUMP	† Check tolerance	
(B) SETTING OF IN WITH GOVERNOR	MECITON PUMP	+ cm3/1000s.	: 13.0
GJIDE SLEEVE TRAV	/EL	CONTROL LEVER	
Rated speed rpm	: 1055	control lever	
guide steeve	. 7/7	position degree	
travel mm Tolerance mm	: 7.47 : + 0.15	tolerance degree	; +- 4,0
		- RATED SPEED	45 ==
Rated speed rpm guide sleeve	: 275	rack travel mm Rated speed rpm	: 10.50 : 1045
travel mm	: 2.04	Tolerance 1/min	
Tolerance mm	: ← 0.20	+ Check	
Rated speed rpm	: 820	speed 1/min	: +- 10
guide sleeve		rack travel mm	
travel mm	: 5.14 : + 0.25	Rated speed rpm	
Tolerance mm	: + 0.25	† Tolerance 1/min † Check	: +- 15
Rated speed rpm guide sleeve	: 480	speed 1/min	: +- 20
travel mm	: 3.34	rack travel mm	
Tolerance mm	: + 0.25	+ Tolerance mm + Rated speed rpm	
Rated speed rpm	: 1282	T rated speed thin	. 1213
guide sleeve travel mm	: 12.00	‡	
· · · · · · · · · · · · · · · · · · ·		•	

speed rpm : 1370 sleeve : 13.50 MAG : + 0.50 nce mm SLEEVE POSITION speed rpm : 1263 ravel in mm : 10.50 nce mm : +- 1.30 OAD DELIVERY AT FULL LOAD STOP speed rpm : 980 d pressure : 1500 uantity 00 strokes : 250.0 nce 00 strokes : +- 1.0 tolerance : +- 5.0 00s. nce 00 strokes : 8.0 tolerance -COS. 13.0 L LEVER Llever on degree : 108.0 nce degree : +- 4.0SPEED ravel mm : 10.50 speed rpm : 1045 : +- 5 nce 1/min 1/min : +- 10 ravel mm : 4.00 speed rpm : 1125 nce 1/min : +- 15 1/min : +- 20 ravel mm : 0.70 nce mm : +- 0.70 speed rpm : 1275

LOW IDLE

control lever

position degree : 76.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 175

CRT mm min. :> 7.00

Testing:

Rated speed rpm : 275
rack travel mm : 3.90
Tolerance mm : + 0.10

Rated speed rpm : 300

TORQUE CONTROL

Rated speed rpm : 980 rack travel mm : 11.50 Tolerance mm : + 0.10

Rated speed rpm : 900 rack travel mm : 11.70 Tolerance mm : + 0.10

Rated speed rpm : 750 rack travel mm : 12.00 Tolerance mm : + 0.05

Rated speed rpm : 700 rack travel mm : 12.00 Tolerance mm : + 0.10

Rated speed rpm : 600 rack travel mm : 11.40 Tolerance mm : + 0.10

Rated speed rpm : 500 rack travel mm : 10.90 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 775
Pressure hPa : 1500
rack travel mm : 12.00
Tolerance mm : + 0.05

Rated speed rpm : 775
Pressure hPa : 460
rack travel mm : 11.00
Tolerance mm : + 0.05

MEASUREMENT

Rated speed rpm : 775

Pressure hPa : rack travel mm : 8.30
Tolerance mm : + 0.20

Pressure hPa : 250 rack travel mm : 9.30 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500
Rated speed rpm : 750
rack travel mm : 12.00
Tolerance mm : + 0.05
Del. quantity
cm3/1000 strokes : 289.0
Tolerance
cm3/1000 strokes : + 2.0

cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 6.0 Spreed

Tolerance cm3/1000 strokes :

Check tolerance cm3/1000s. : 15.0

Aneroid pressure

hPa : Rated speed rpm : 600
Del. quantity
cm3/1000 strokes : 188.0
Tolerance
cm3/1000 strokes : + 1.0

cm3/1000 strokes Check tolerance cm3/1000s.

: + 5.0

Spreed Tolerance

cm3/1000 strokes : Check tolerance 10.0

10.0

cm3/1000s. : 15.0

LOW IDLE

Rated speed rpm	:	275	
		3.9C - 0.10	
Del. quantity cm3/1000 strokes Tolerance	:	17.0	
cm3/1000 strokes Check tolerance	: +	- 3.0	
cm3/1000s. Spreed	: +	- 6.0	
Tolerance cm3/1000 strokes Check tolerance	:	6.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 02.03.98 Test oil : ISO 4113

Combination No. : 0 402 846 080

Injection pump

Pump designation : PE6P12OA32ORS8044 . EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050FA1027K

Governer no. : 0 421 815 311

Cust. part No. : 11031995

: -PO2 V.03/97

Customer—spec. information Customer : VCE

Motor : TD122KHE Power KW : 209.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 150 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50
Tolerance mm : + 0.05
Check

CHECK

tolerance mm : + 0.10

Rack travel in mm : 10.35
Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

		† Tolerance mm	: + 0.20
BASIC SETTING		Rated speed rpm guide sleeve	: 775
Rated speed rpm	: 800	+ travel mm	: 6.42
		Tolerance mm	
Rack travel in me		Rated speed rpm	: 470
Tolerance mm	: + 0.05	guide sleeve travel mm	: 3.79
Del. quantity cm3/1000 strokes	: 231.0	† Tolerance mm	: ← 0.25
Tolerance		+ Rated speed rpm + guide sleeve	: 1370
cm3/1000 strokes	: ← 1.0	travel mm Tolerance mm	: 13.50 : + 0.50
Check tolerance		- Toterance mm	: - 0.50
cm3/1000s.	: + 4.0	GUIDE SLEEVE POSI	TION
Spreed		+ 00102 022042 1001	. 1
Tolerance		control lever	
cm3/1000 strokes	: 8.0	+ position degree	
Chark talamana		Rated speed rpm	: 1230
Check tolerance cm3/1000s.	: 11.0	Rack travel in mm	9.40
	- 1110	Tolerance mm	
		ļ 	
Rated speed rpm	: 300	FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rack travel in m		Rated speed rpm	: 800
Tolerance mm	: +- 0.10	+ Aneroid pressure	
Del. quantity	07.0	+ hPa	: 1500
cm3/1000 atrokes	: 25.0	Del. quantity	. 274 ()
Tolerance cm3/1000 strokes	: + 3.0	+ cm3/1000 strokes + Tolerance	: 251.0
Check tolerance	5.0	cm3/1000 strokes	: +- 1.0
cm3/1000s.	: ← 6.0	+ Check tolerance	
Spreed			: ← 4.0
Tolerance		+ Spreed	
cm3/1000 strokes Check tolerance	: 5.0	+ Tolerance + cm3/1000 strokes	. 8.0
cm3/1000s.	: 8.0	+ Check tolerance	. 0.0
		cm3/1000s.	: 11.0
(B) SETTING OF IN	WECTION PUMP	‡	
WITH GOVERNOR			
	ويودانها المشادات ويووين ومرشره والمشادرات ويورون ويوجو والمواد	CONTROL LEVER	
GUIDE SLEEVE TRAN	/EL	control lever	
Datad an-ad an-	. 1105	+ position degree	
Rated speed rpm guide sleeve	: 1105	tolerance degree	: +- 4.0
travel mm	: 9.77	- control lever	
Tolerance mm		position degree	
Dahad an east one	. 700	tolerance degree	: +- 4.0
Rated speed rpm guide sleeve	: 300	RATED SPEED	
travel mm	: 2.01	rack travel mm	: 11.00
		•	

Rated speed rpm Tolerance 1/min	: 1085 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 1180
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : + 4.0
control lever position degree tolerance degree	: 23.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
CRT man min.	: > 6.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 3.70 : + 0.10
Rated speed rpm	: 350
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.80 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.00 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 550 : 12.45 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 690 : 11.70 : ← 0.15
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.10 : ← 0.30

Rated speed rpm	: 550
rack travel mm	: 12.75
Tolerance mm	: + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 550
Pressure hPa	: 1500
rack travel mm	: 12.45
Tolerance mm	: + 0.10
Rated speed rpm	: 550
Pressure hPa	: -
rack travel mm	: 10.35
Tolerance mm	: + 0.20
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa	: 600
rack travel mm	: 1.75
Tolerance mm	: + 0.20
Pressure hPa	: 260
rack travel mm	: 0.25
Tolerance mm	: ← 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	1500
Rated speed rpm	:	1050
Del. quantity		
cm3/1000 strokes	:	221.0
Tolerance		. 70
cm3/1000 strokes Check tolerance	:	+- 3.0
cm3/1000s.	• .	+ ~ 6.0
Spreed	•	. 0.0
Tolerance		
cm3/1000 strokes	:	10.0
Check tolerance		
cm3/1000S.	:	14.0
		
Aneroid pressure		

Aneroid pressure
hPa : 1500
Rated speed rpm : 550
rack travel mm : 12.45
Tolerance mm : + 0.10

Del. quantity cm3/1000 strokes Folerance	: 285.0
cm3/1000 strokes Check tolerance	: ← 4.0
cm3/1000s.	: + 6.0
Aneroid pressure	
Rated speed rpm Del. quantity	550
cm3/1000 strokes Tolerance	: 208.0
cm3/1000 strokes Check tolerance	: ← 1.0
cm3/1000s.	: +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 10.35
Tolerance mm Del. quantity	: ← 0.30
cm3/1000 strokes	: 160.0
Tolerance	
cm3/1000 strokes	: +- 15.0
Check tolerance	: + 19.0
_OW IDLE	
Rated speed rpm	: 300
Rack travel in mm	: 3.70
Folerance mm	: + 0.10
Del. quantity	
cm3/1000 strokes	: 23.0
Folerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s.	: +- 6.0
Spreed	
Tolerance cm3/1000 strokes	: 5.0
Check tolerance	: 5.0
cm3/1000s.	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26,02,98 : ISO 4113

Combination No. : 0 402 946 010

Injection purp

Pump designation : PES6P120A320RS8028 .

EP type number : 0 412 926 021

Governor

Governer no.

Governer design. : RQV275...1175PA1101K

: 0 421 815 982

Cust. part No. : CCEP 5133 A 66-193

Customer spec, information

Customer : RENAULT V.I.

Motor

: MIDR 060226 M51

Power KW

: 158.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve

: 2 417 413 078

Inlet press. bar :

2.5

Tolerance bar $: \leftarrow 0.1$

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

1.5

Test lines

: 1 680 750 089

Outside diameter: 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.00 : +- 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 13.00 : +- 0.50

Tolerance mm

Firing order

: 1-5- 3- 6- 2-

Phasing

: 0-60-120-180-240

: -300 : ← 0.50

Tolerance Check

tolerance *NW

: + 0.75

Start of delivery mark

*NW after s.o.d. : -0.15

Tolerance : + - 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

travel

12.30

Difference * CS :

2.00

CRT ZERO POSITION

Rack travel in mm Tolerance mm	: 13.70 : + 0.05
BASIC SETTING	
Rated speed rpm	: 1175
Del. quantity cm3/1000 strokes	: 268.0
Toterance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed	
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	
Rack travel in man Tolerance man Del. quantity	: −7.30 : ← 0.10
cm3/1000 strokes	: 42.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: + 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP -
GUIDE SLEEVE TRAV	EL .
Rated speed rpm guide sleeve	: 1230
travel mm Tolerance mm	: 8.95 : + 0.10
Rated speed rpm guide sleeve	: 275
travel mm	: 1.01

Tolerance mm	: +- 0.10	
Rated speed rpm guide sleeve	: 877	
travel mm Tolerance mm	: 6.51 : + 0.20	
Rated speed rpm guide sleeve	: 389	
travel mm Tolerance mm	: 2.39 : + 0.20	
Rated speed rpm guide sleeve	: 439	
travel mm Tolerance mm	: 3.01 : + 0.20	
Rated speed rpm guide sleeve	: 550	
travel mm Tolerance mm	: 3.92 : + 0.20	
Rated speed rpm guide sleeve	: 1650	
travel mma Tolerance mm	: 13.50 : + 0.50	
GUIDE SLEEVE POSITION		
control lever		
position degree Rated speed rpm	: - 1 : 1430	
Rack travel in mm Tolerance mm	: 11.20 : + 2.00	

FULL	LOAD	DEL TVERY	ΔΤ	FULL	LOAD	STOP

Rated speed rpm	: 1175
Aneroid pressure hPa	: 1600
Del. quantity	. 1000
cm3/1000 strokes	: 268.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: + 4.0
Spreed	
Tolerance cm3/1000 strokes	: 5.0
Check tolerance	. 2.0
cm3/1000s.	: 9.0

CONTROL LEVER

control lever	- Rated speed rpm : 1175
position degree : 295.0 tolerance degree : + 4.0	Pressure hPa : 1600
RATED SPEED	Rated speed rpm : 500 Pressure hPa : -
rack travel mm : -1.00	- Pressure hPa : rack travel mm : -5.40 - Tolerance mm : +- 0.20
Rated speed rpm : 1240	Tolerance mm : +- 0.20
Tolerance 1/min : + 15	- MEASUREMENT
rack travel mm : -9.70 + Rated speed rpm : 1430 +	- - Rated speed rpm : 1175
Tolerance 1/min : + 5	- Nated speed Tpill . 1175
+	- Pressure hPa : 320 - rack travel mm : -4.70
rack travel mm : -13.20	- rack travel mm : -4.70 - Tolerance mm : +- 0.20
Tolerance man : + 0.55 Rated speed rpm : 1550	- Toterance mm : +- 0.20
	Pressure hPa : 560
†	- rack travel mm : -2.95
	- Tolerance mm : +- 0.05
LOW IDLE	- Start interlock
· · · · · · · · · · · · · · · · ·	•
control lever	- Rated speed rpm :> 175 - Rated speed rpm :< 240
position degree : 245.0 + tolerance degree : + 4.0 +	- Rated speed rpm : < 240
	- Check
Setting point w/out bumper spring	- speed 1/min : > 155
+	- Check
Pated sheed rom · 200	speed 1/min · < 260
Rated speed rpm : 200	- speed 1/min : < 260
Rated speed rpm : 200 CRT mm min. : < -6.70	
CRT mm min. : < -6.70	speed 1/min : < 260
CRT mm min. : < -6.70 Testing:	- FUEL DELIVERY CHARACTERISTICS
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275	FUEL DELIVERY CHARACTERISTICS Aneroid pressure
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : +- 3.0
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1175	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : +- 3.0
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1175 Rated speed rpm : 650	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1175 Rated speed rpm : 650 rack travel mm : -1.55	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1175 Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1175 Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350 rack travel mm : -2.80	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 1175 Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25 Aneroid pressure hPa : -
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350 rack travel mm : -2.80	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25 Aneroid pressure hPa : - Rated speed rpm : 500
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350 rack travel mm : -2.80 Tolerance mm : + 0.25	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 148.0
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350 rack travel mm : -2.80 Tolerance mm : + 0.25	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25 Aneroid-pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 148.0 Tolerance
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350 rack travel mm : -2.80 Tolerance mm : + 0.25	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 148.0 Tolerance cm3/1000 strokes : + 1.0
CRT mm min. : < -6.70 Testing: Rated speed rpm : 275 rack travel mm : -7.30 Tolerance mm : + 0.10 Rated speed rpm : 400 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : -1.55 Tolerance mm : + 0.10 Rated speed rpm : 350 rack travel mm : -2.80 Tolerance mm : + 0.25	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1600 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 260.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 rack travel mm : -2.80 Tolerance mm : + 0.25 Aneroid-pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 148.0 Tolerance

M20

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 95.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : -7.30Tolerance mm : +0.10

Del. quantity

cm3/1000 strokes : 42.0

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 04.03.98 : ISO 4113

Combination No. : 0 403 466 151AA

Injection pump

Pump designation : PES6MW100/120RS1238

EP type number : 0 413 406 237

Governor

Governer design. : RSV450...1100MW2A367

Governer no. : 0 420 085 250

Cust. part No. : 3926877

Customer-spec. information Customer : CDC

Motor

: 6 CT

Power KW

: 138.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

M22

x inside diameter :

2.0

x Length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm Tolerance mm

: 2.80 : + 0.05

Check

tolerence mm : + 0.10

Rack travel in mm : 10.50

: + 1.50 Toterance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance "NW : ← 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00

Tolerance : + 0.50

Check

tolerance *NW

: +- 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

15.00

Difference * CS : 2.00

BASIC SETTING Rated speed rpm : 1050 11.10 Rack travel in mm: Tolerance ma : + 0.10 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance 4.0 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance 7.5 cm3/1000s.Rated speed rpm : 450 Rack travel in mm: 5.15 Tolerance mm 0.05 Del. quantity cm3/1000 strokes : 25.5 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : **←** 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION

control lever position degree : -3

governor spring pre-tension

click setting x: 3.00

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050 Aneroid pressure hPa 1200 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s.: +-4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 7.5

CONTROL LEVER

control lever 94.0 position degree : tolerance degree : +-RATED SPEED rack travel mm 10.10 Rated speed rpm : 1090 Tolerance 1/min rack travel mm 6.40 : 1175 Rated speed rpm Tolerance 1/min 1.00 rack travel mm : + - 0.70Tolerance mm Rated speed rpm 1350 rack travel mm 6,40 : Rated speed rpm Tolerance 1/min

LOW IDLE

control lever
position degree : 78.0
tolerance degree : + 4.0

Control lever difference
Grad : 16.0

Grad : 16.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm : rack travel mm : Tolerance mm : Tolerance mm : rack travel mm : Tolerance mm : rack travel mm : rack travel mm : Tolerance mm : rack travel mm	: 4.15 : + 0.05	Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 rack travel mm : 11.15	_
Rated speed rpm : rack travel mm : Tolerance mm : Rated speed rpm :	: 11.35 : +- 0.10 : 1000	Tolerance mm : + 0.20 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 121.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	-
Pressure hPa : rack travel mm :	: +- 0.20 	cm3/1000s. : + 3.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 177.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0	
Rated speed rpm : Pressure hPa : rack travel mm :	1200 750 140.0	Rated speed rpm : 450 Rack travel in mm : 5.15 Tolerance mm : + 0.05 Del. quantity cm3/1000 strokes : 25.5 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 06.03.98 Test oil : ISO 4113

Combination No. : F 000 409 004AB

Injection bump

Pump designation : PES6P120A720RS3256 .

EP type number

: 9 400 087 080

Governor

6overner design. : RQV350...1300PA1311

Governer no.

: F 000 420 106

Cust. part No. : 0270748502

Customer-spec. information Customer : MBB

Motor

: OM 366 LA

Power KW

: 139.8

TEST BENCH REQUIREMENTS

Inlet line

: 4.1

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar

: + 1.5

Test Lines : 1 680 750 075

Outside diameter: 8.0

REMARKS

x inside diameter: 3.0

x Length mm : 1000

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

26.0 Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm 3.05

: ← 0.05 Tolerance mm

Check

: +- 0.10 tolerance ma

Rack travel in mm: 20.50

Tolerance mm : **←** 0.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + - 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 10.70

: + 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 136.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000S.

: +- 4.0

Spreed

Tolerance		+
cm3/1000 strokes	: 5.0	control lever position degree : - 1
Check tolerance cm3/1000s.	: 9.0	Rated speed rpm : 1360
		Rack travel in mm: 16.50 Tolerance mm: + 1.30
Rated speed rpm	: 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m	m: 7.50	TOLE CONDUCTIVERY AT FOLE EOAD STOP
Tolerance mm	: + 0.10	Rated speed rpm : 1300
Del. quantity cm3/1000 strokes	• 17.0	+ Aneroid pressure + hPa : 900
Tolerance	. 17.0	Del. quantity
cm3/1000 strokes	: 	+ cm3/1000 strokes : 136.0
Check tolerance		+ Tolerance
cm3/1000s. Spreed	: +- 6.0	t cm3/1000 strokes : + 1.0 Check tolerance
Tolerance		+ cm3/1000s. : + 4.0
cm3/1000 strokes		+ Spreed
Check tolerance		+ Tolerance
cm3/1000s.	: 12.0	+ cm3/1000 strokes : 5.0 + Check tolerance
		+ cm3/1000s. : 9.0
(B) SETTING OF I	NOECLION FOR	
GUIDE SLEEVE TRA	VEL	+ CONTROL LEVER
		+ control lever
Rated speed rpm guide sleeve	: 1100	<pre>position degree : 56.0 tolerance degree : + 6.0</pre>
travel mm	: 6.45	+ coterance degree : +- o.b
Tolerance mm	: ← 0.25	control lever
5-1 -4	. 4750	+ position degree : 113.0
Rated speed rpm guide sleeve	: 1350	tolerance degree : +- 6.0
travel mm	: 8.50	T RATED SPEED
Tolerance mm		rack travel mm : 9.70
Dated amond num	. 750	Rated speed rpm : 1340
Rated speed rpm guide sleeve		Tolerance 1/min : +- 5
travel mm Tolerance mm	: 1.25	rack travel mm : 4.00
Tolerance mm	: +- 0.25	+ Rated speed rpm : 1440
Dated apped non	. 450	Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 650	rack travel mm : 0.50
travel mm	: 4.15	+ Tolerance mm : +- 0.50
Tolerance mm		Rated speed rpm : 1570
Rated speed rpm	: 1460	‡
guide sleeve		†
travel mm Tolerance mm	9.55	LOU TOLE
ioterance mm	: + 0.25	LOW IDLE
GUIDE SLEEVE POS	TTION	control lever
THE VEREIN TOO.	φ., ∞.Ψ[Ψ	position degree : 80.0
		tolerance degree : + 6.0

	†	Rated speed rpm : < 270
control lever position degree tolerance degree	: 23.0 : + 6.0	Check speed 1/min :> 80
Setting point w/o	out bumper spring	Check speed 1/min : < 290
Rated speed rpm	: 100	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 10.50	FOEL DELIVERY CHARACTERISTICS
Testing:	1	Aneroid pressure hPa : 900
Rated speed rpm rack travel mm Tolerance mm	: 7.50 +	Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 115.5
Rated speed rpm	: 375	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 10.70 +	Aneroid pressure
Rated speed rpm rack travel mm Tolerance mm	: 800 : 10.70 : + 0.05	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 41.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	<u> </u>	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
SETTING		Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 10.70 +	STARTING FUEL DELIVERY
Rated speed rpm Pressure hPa	: 500	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 100.0
MEASUREMENT	$\frac{1}{2}$	Tolerance cm3/1000 strokes : +- 10.0
Rated speed rpm	: 500	Check tolerance cm3/1000s. : +- 14.0
Pressure hPa rack travel mm Tolerance mm	: 1.75	
Pressure hPa rack travel mm Tolerance mm	: 200 : 0.70 : ← 0.10	LOW IDLE Rated speed rpm : 350
Start interlock Rated speed rpm M28	: > 100	Rack travel in mm: 7.50 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 17.0

Rated speed rpm : < 270

Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : ← 6.0 Spreed Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s.

12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 06.03.98 Test oil : ISO 4113

Combination No. : F 000 409 007

Injection pump

Pump designation : PES6P110A720RS3389

EP type number : F 000 400 002

Governor

Governer design. : RQV300...1300PA1343K

Governer no. : F 000 420 500

Cust. part No. : 0280743002

Customer-spec. information

Customer : M88

Motor : OM366LA-EURO II

Power KW : 150.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.3

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.30 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 21.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 14.30

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 122.0

ms/ rood strokes : 122.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

	: 4.0	+ Aneroid pres + hPa + Del. quantis
Check tolerance		- cm3/1000 sti
cm3/1000s.	: 7.5	+ Tolerance
		+ cm3/1000 sti
		+ Check tolera + cm3/1000s.
Rated speed rpm	: 300	Spreed Tolerance
Rack travel in m	m: 5.50	+ cm3/1000 st
Tolerance m	: +- 0.20	+ Check tolers
Del. quantity cm3/1000 strokes	: 13.0	† cm3/1000s.
Tolerance	: 13.0	Ī
cm3/1000 strokes	: +- 2.5	
Check tolerance		+ CONTROL LEVI
cm3/1000s.	: ← 5.0	+
Spreed Talanana		+ control leve
Tolerance cm3/1000 strokes	: 4.5	+ position dec
Check tolerance	• 4.5	tolerance de
cm3/1900s.	: 7.5	RATED SPEED
		+ rack travel
4		+ Rated speed
(B) SETTING OF I	NJECTION PUMP	† Tolerance 1
WITH GOVERNOR		† rack travel
		- + Rated speed
GUIDE SLEEVE TRA	VEL	+ Tolerance 1
		1 10001010017
		+
Rated speed rpm		† † rack travel
Rated speed rpm guide sleeve	: 1350	† rack travel † Tolerance mr
Rated speed rpm guide sleeve travel mm	: 1350 : 8.50	rack travel Tolerance m Rated speed
Rated speed rpm guide sleeve travel mm	: 1350	† rack travel † Tolerance mr
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1350 : 8.50 : ← 0.10	† rack travel † Tolerance mr
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 1350 : 6.50 : + 0.10 : 300	rack travel Tolerance m Rated speed
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 1350 : 8.50 : ← 0.10 : 300 : 1.05	† rack travel † Tolerance mr
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 1350 : 6.50 : + 0.10 : 300	rack travel Tolerance m Rated speed
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25	rack travel Tolerance more Rated speed LOW IDLE
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25	rack travel Tolerance m Rated speed LOW IDLE control leve
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25	rack travel Tolerance m Rated speed LOW IDLE control level position deg
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel rmm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500	rack travel Tolerance m Rated speed LOW IDLE control level position deg
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 3.05 : + 0.25	rack travel Tolerance m Rated speed
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Rated speed rpm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 3.05 : + 0.25	rack travel Tolerance m Rated speed LOW IDLE control leve position deg tolerance de
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 4.05 : 700	rack travel Tolerance m Rated speed LOW IDLE control leve position ded tolerance de
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 3.05 : + 0.25 : 700 : 4.35	rack travel Tolerance m Rated speed LOW IDLE control leve position des tolerance de Setting poir Rated speed
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 4.05 : 700	rack travel Tolerance m Rated speed LOW IDLE control leve position des tolerance de Setting poir Rated speed
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm Rated speed rpm Rated speed rpm Rated speed rpm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 3.05 : + 0.25 : 700 : 4.35 : + 0.25	rack travel Tolerance m Rated speed LOW IDLE control leve position deg tolerance de
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 3.05 : + 0.25 : 700 : 4.35 : + 0.25 : 1780	rack travel Tolerance m Rated speed LOW IDLE control leve position ded tolerance de tolerance de CRT mm min. Testing:
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 1350 : 8.50 : + 0.10 : 300 : 1.05 : + 0.25 : 500 : 3.05 : + 0.25 : 700 : 4.35 : + 0.25	rack travel Tolerance more Rated speed LOW IDLE control leve position degrance de tolerance de CRT mm min.
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: 1350 :	rack travel Tolerance m Rated speed LOW IDLE control leve position deg tolerance de tolerance de CRT mm min. Testing: Rated speed

+	Aneroid pressure	
1	hPa : 1000	
1	Del. quantity	
1	cm3/1000 strokes : 122.0	
+	Tolerance	
+	cm3/1000 strokes : +- 1.0	
+	Check tolerance	
+	cm3/1000s. : +- 4.0	
+	Spreed	
+	Tolerance	
+	cm3/1000 strokes : 4.0	
+	Check tolerance	
†	cm3/1000s. : 7.5	
†		
T		
Ι	CONTROL LEVER	
1	CONTINUE FEACT	
1	control lever	
1	position degree : 109.0	
1	tolerance degree : + 4.0	
┊╇╇╼┾┆╇╇╈╬╇╇╇╇╇╇╇╇╇		
<u> </u>	RATED SPEED	
+	rack travel mm : 13.30	
+	Rated speed rpm : 1350	
+	Tolerance 1/min : + 5	
+		
+	rack travel mm : 4.00	
+	Rated speed rpm : 1515	
+	Tolerance 1/min : + 15	
ŧ		
+	rack travel mm : 0.50	
†	Tolerance mm : +- 0.50	
†	Rated speed rpm : 1700	
†		
I		
I		····
I	LOW IDLE	
1	The second secon	
1		
1	control lever	
1	position degree : 64.0	
+	tolerance degree : +- 4.0	
+		
\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Setting point w/out bumper spri	ng
+		-
+	Rated speed rpm : 200	
+	_	
+	CRT mm min. $:> 6.00$	
+	- · ·	
†	Testing:	
+	8.4	
†	Rated speed rpm : 300	
†	rack travel mm : 5.50	
†	Tolerance mm : \leftarrow 0.20	
I	Rated speed rpm : 425	
I	Rated speed rpm : 425	
I		
1		

Rated speed rpm : 1300

TORQUE CONTROL Rated speed rpm rack travel mm	: 1300 : 14.30	FUEL DELIVERY CHA	RACTERISTICS
Tolerance mm	: +- 0.05	Aneroid pressure hPa	: 1000
Rated speed rpm rack travel mm	: 600 : 12.90	Rated speed rpm Del. quantity	
Tolerance mm	: ← 0.10	cm3/1000 strokes Tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.85 : +- 0.05	cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0
Rated speed rpm	: 800		
rack travel mm Tolerance mm	: 13.25 : ← 0.10	Aneroid pressure	: 1000
Rated speed rpm		Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.85 : + 0.05
rack travel mm Tolerance mm		Del. quantity cm3/1000 strokes	
ANEROID/ALTITUDE		Tolerance cm3/1000 strokes	: + 2.0
COMPENSATOR TEST		Check tolerance cm3/100Gs.	: ← 5.0
SETTING			
Rated speed rpm	: 500	+ Aneroid pressure + hPa	: 1000 : 800
Pressure hPa rack travel mm Tolerance mm	: 1000 : 12.90 : + 0.05	Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm Pressure hPa	: 500	Tolerance cm3/1000 strokes Check tolerance	: + 2.0
MEASUREMENT	•	cm3/1000s.	: + 5.0
Rated speed rpm	: 500	Aneroid pressure	4000
Pressure hPa rack travel mm	: 150 : 0.90	+ hPa + Rated speed rpm + Del. quantity	: 1000 : 700
Tolerance mm	: +- 0.05	cm3/1000 strokes Tolerance	
Pressure hPa rack travel mm	: 450 : 3.40	cm3/1000 strokes Check tolerance	
Tolerance mm	: ← 0.10	cm3/1000s	: + 5.0
Start interlock		Aneroid pressure	• •••
Rated speed rpm Rated speed rpm	: > 100 : < 180	Rated speed rpm Del. quantity	500
Check		+ cm3/1000 strokes + Tolerance	
speed 1/min Check	: > 80	cm3/1000 strokes Check tolerance	
speed 1/min	: < 220	+ cm3/1000s.	: +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 15.00 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 136.5

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 5.50
Tolerance mm: + 0.20

Del. quantity

cm3/1000 strokes : 13.0

Tolerance

cm3/1000 strokes : +- 2.5

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance

cm3/1000s. : 7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 07.01.98 Edition Test oil : ISO 4113

Combination No. : F 000 409 203

Injection pump

Pump designation : PES6A100b320/3R\$2691

EP type number : 9 410 230 025

Governor

Governer design. : RSV400...1100A2C969R

6overner no. : F 000 420 702

Cust. part No. : 3353232

Customer-spec. information Customer : CUMMINS Motor * 6 CT Power KW : 120.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 10.00

: + 0.10 Tolerance Check

tolerance *NW : +- 0.23

Barrel no. : 1

Beginning of delivery differende

and maximum rack

Tolerance mm : + 1 50 Tolerance mm : + 1.50 Difference °CS : 3.50

BASIC SETTING

Rated speed rpm : 1100	‡
Rack travel in mm: 12.25 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure
Del. quantity cm3/1000 strokes : 118.0	hPa : - Del. quantity cm3/1000 strokes : 118.0
Tolerance cm3/1000 strokes : + 1.0	Tolerance : + 1.0 - Check tolerance
Check tolerance cm3/1000s. : + 3.0	+ cm3/1000s. : + 3.0 + Spreed + Tolerance
Spreed	cm3/1000 strokes : 3.5 Check tolerance
Tolerance cm3/1000 strokes : 3.5	- cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	CONTROL LEVER
	+ control lever
	+ position degree : 90.0
Rated speed rpm : 450	tolerance degree : + 4.0
Rack travel in mm: 5.10	RATED SPEED
Tolerance mm : +- G.10	+ rack travel mm : 11.30
Del. quantity	Rated speed rpm : 1150
cm3/1000 strokes : 12.5	† Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : +- 2.0	+ rack travel mm : 4.00
Check tolerance	+ rack travel mma : 4.00 + Rated speed rpm : 1225
cm3/1000S. : ← 4.5	+ Tolerance 1/min : + 15
Spreed	+
Tolerance	† rack travel mm : 0.85
cm3/1000 strokes : 5.5	+ Tolerance mm : + 0.55
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 1350
cm3/1000s. : 9.0	$\frac{1}{1}$
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	LOW IDLE
	t control lever
GUIDE SLEEVE POSITION	+ position degree : 67.0
	tolerance degree : + 4.0
control lever	Setting point w/out bumper spring
position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 450
nated speed (pii) . OOO	
Rack travel in mm : 0.50	+ rack travel mm : 4.60 + Tolerance mm : +- 0.10
Tolerance mm : +- 0.20	+
	Rated speed rpm : 100
governor spring pre-tension	+ CRT mm min. : > 19.00
click setting x : 2.50	T CKI HAM (HIII) / 17.00
CEICK SECENTS A . C.JO	ı

Testing:

Rated speed rpm : 450 rack travel mm : 5.10 Tolerance mm : + 0.10

rack travel mm : 2.00 Rated speed rpm : 600 Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 12.25
Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 12.30
Tolerance mm : + 0.10

Rated speed rpm : 400 rack travel mm : 12.85 Tolerance mm : + 0.25

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00

Del. quantity

cm3/1000 strokes : 142.0

Tolerance

cm3/1000 strokes : + 8.0

Check tolerance

cm3/1000s. : + 11.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 12.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

End of test specification sheet

80M

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 10.03.98 Edition : ISO 4113 Test oil

Combination No. : F 000 409 211

Injection pump

Pump designation : PES6A100D320/3RS2691

EP type number : 9 410 230 025

Governor

Governer design. : RSV400...1100A2C972R

Governer no. : F 000 420 705

Cust. part No. : 3352893

Customer—spec. information Customer : CUMMINS : 6 CT Motor Power KW : 120.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.85 : + 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 11.00

: + 0.10 Tolerance

Check

tolerance *NW : + 0.23

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

: 10.50 travel Difference * CS : 3.50

BASIC SETTING

Rated speed rpm	: 1100		
Rack travel in mon Tolerance mon	: 10.25 : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure	
Del. quantity cm3/1000 strokes	: 88.5	hPa : - Del. quantity cm3/1000 strokes : 88.5	
Tolerance cm3/1000 strokes	: + 1.0	Tolerance cm3/1000 strokes : + 1.0 Check tolerance	
Check tolerance cm3/1000s.	; + 3.0	cm3/1000s. : +- 3.0 Spreed Tolerance	
Spreed		cm3/1000 strokes : 3.5 Check tolerance	
Tolerance cm3/1000 strokes	: 3.5	cm3/1000s. : 8.0	
Check tolerance cm3/1000s.	: 8.0	CONTROL LEVER	-
Rated speed rpm	: 400	control lever position degree : 89.0 tolerance degree : + 4.0	
•	+	•	
Rack travel in mm Tolerance mm	: 5.60 : + 0.10	RATED SPEED rack travel mm : 9.20	
Del. quantity	1	Rated speed rpm : 1145	
cm3/1000 strokes	: 16.0	Tolerance 1/min : + 5	
Tolerance	+		
	: + 2.0 +	rack travel mm : 4.00	
Check tolerance	: + 4.5	Rated speed rpm : 1185 Tolerance 1/min : +- 15	
Spreed	· - 4.5	roterance inmin ; +- is	
Tolerance	1	rack travel mm : 0.85	
cm3/1000 strokes	: 5.5	Tolerance mm : + 0.55	
Check tolerance	+	Rated speed rpm : 1350	
cm3/1000s.	9.0		
(B) SETTING OF INJ	ECTION PUMP I		_
WITH GOVERNOR	‡	LOW IDLE	
GUIDE SLEEVE POSIT	ION	<pre>control lever position degree : 66.0 tolerance degree : +- 4.0</pre>	
control lever position degree	: - 3	Setting point w/out bumper spring	
Rated speed rpm		Rated speed rpm : 400 rack travel mm : 5.10	
Rack travel in mm Tolerance mm		rack travel mm : 5.10 Tolerance mm : +- 0.10	
governor spring	1	Rated speed rpm : 100	
pre-tension click setting x	: 2.50	CRT mm min. : > 19.00	

Testing:

Rated speed rpm rack travel mm Tolerance mm	: +-	400 5.60 0.10
rack travel mm	:	2.00

rack travel mm	:	2.00
Rated speed rpm	:	595
Tolerance 1/min	: +	- 30

TORQUE CONTROL		
Rated speed rpm	:	1100
rack travel mm	:	10.25
Tolerance mm	: -	

Rated speed rpm	:		500
rack travel mm	:		12.20
Tolerance mm	:	+-	0.10

Rated speed rpm	:	750
rack travel mm	:	12.20
Tolerance mm	: 4	- 6.10

Rated speed rpm	:		950
rack travel mm	:		11.40
Tolerance mm	•	+-	0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	_
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	103.0

Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0

Aneroid pressure		
hPa	:	_
Rated speed rpm	:	750
rack travel mm	:	12.20
T.1		0.40

Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 116.0
Tolerance
cm3/1000 strokes : + 2.0

Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		20.00
Tolerance mm	:	+-	1.00
Del. quantity			
cm3/1000 strokes	:		142.0
Tolerance			
cm3/1000 strokes	:	+-	8.0
Check tolerance			
cm3/1000s.	:	+-	11.0

LOW IDLE

Rated speed rpm	:	4 0 0
Rack travel in mm Tolerance mm	: : +-	5.60 0.10
Del. quantity cm3/1000 strokes Tolerance	:	16.0
cm3/1000 strokes Check tolerance	: +-	2.0
cm3/1000s. Spreed Talerance	: +-	4.5
cm3/1000 strokes Check tolerance	•	5.5
cm3/1000s.	:	9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26.02.98 : ISO 4113

Combination No.

: 0 402 034 702

Injection pump

Pump designation : PES4P120B120RS3379 .

EP type number

: 0 412 024 702

Governor

Governer design. : RQV475...1250PA1380K

Governer no.

: 0 421 815 560

Cust. part No. : 3933367

Customer spec. information : CDC Customer

Motor

: 4BTA-A

Power KW

: 82.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve

: 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 015

Outside diameter : 6.0

N12

x inside diameter : 3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm

: 3.60 : + 0.05

Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

: 0-90-100-270 Phasing Tolerance : + 0.50

Check

tolerance *NW

: + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance Check

: +- 0.50

tolerance °NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm :

10.15

Tolerance mm

: +- 0.05

Del. quantity cm3/1000 strokes : 118.5	Tolerance mm : + 0.25
Tolerance	+ Rated speed rpm : 1660 + guide sleeve
cm3/1000 strokes : + 1.0	+ travel mm : 13.50 + Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+
Tolerance	Rated speed rpm : 1250 Aneroid pressure
cm3/1000 strokes : 8.0	hPa : 350 + Del. quantity
Check tolerance cm3/1000S. : 12.0	+ cm3/1000 strokes : 118.5 + Tolerance
	+ cm3/1000 strokes : + 1.0 + Check tolerance
Rated speed rpm : 475	cm3/1000s. : + 4.0 Spreed
Rack travel in mm : 5.50	Tolerance : 8.0
Tolerance mm : +~ 0.10	+ Check tolerance
Del. quantity cm3/1000 strokes : 26.5 Tolerance	cm3/1000s. : 12.0
cm3/1000 strokes : + 3.0	Ţ
Check tolerance cm3/1000s. : + 5.0	T CONTROL LEVER
Spreed	control lever
Tolerance cm3/1000 strokes : 4.0	+ position degree : 117.0 + tolerance degree : + 4.0
Check tolerance	+
cm3/1000S. : 8.0	+ RATED SPEED + rack travel mm : 9.10
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1315 Tolerance 1/min : + 15
WITH GOVERNOR	+
	rack travel mm : 4.00 Rated speed rpm : 1400
GUIDE SLEEVE TRAVEL	Tolerance 1/min : + 5
Rated speed rpm : 1312	rack travel mm : 0.50
guide sleeve travel mm : 9.56	+ Tolerance mm : + 0.50 + Rated speed rpm : 1500
Tolerance mm : ← 0.15	1
Rated speed rpm : 475 guide sleeve	<u> </u>
travel mm : 1.75	LOW IDLE
Tolerance mm : +- 0.20	İ
Rated speed rpm : 993 guide sleeve	control lever position degree : 73.0
travel mm : 6.53	tolerance degree : + 4.0
Tolerance mm : + 0.25	+ Control lever difference
Rated speed rpm : 680	+ Grad : 44.0
guide sleeve travel mm : 3.84	tolerance degree : + 6.0

Setting point w/ou	t bumper spring +	Check	
Rated speed rpm	: 400	speed 1/min Check	: > 80
CRT mm min.	: > 6.80	speed 1/min	: < 405
Testing:	1	FUEL DELIVERY CHA	PACTESTOTICS
Rated speed rpm	: 475	TOLL DELIVERY CITY	MACIENIO I I CO
rack travel mm Tolerance mm	: + 0.10	Aneroid pressure	. 750
Rated speed rpm	: 550	Rated speed rpm	
TARRALE ASSISTAN		Del. quantity cm3/1000 strokes	: 110.5
TORQUE CONTROL Rated speed rpm	: 1250	Tolerance cm3/1000 strokes	: + 3.0
rack travel mm	: 10.15	Check tolerance	3.0
rack travel mm Tolerance mm	: +- 0.05	cm3/1000s. Spreed	: +- 6.0
Rated speed rpm	: 750	Tolerance	
rack travel mm	: 9.75 +	cm3/1000 strokes	
Tolerance mm	: → 0.10	Check tolerance cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 550 +		
rack travel mm	: 9.45 +	4	
iolerance mm	: + 0.20	rack travel mm Tolerance mm	
ANEROID/ALTITUDE	1		
COMPENSATOR TEST	1	Aneroid pressure	
	1	hPa	: -
	+	Rated speed rpm	: 1250
SEITING	+	Del. quantity	
	t +	cm3/1000 strokes	: 103.0
Rated speed rpm Pressure hPa	: 1250 +	Tolerance	. 4.0
	+	cm3/1000 strokes Check tolerance	
Rated speed rpm	· · · · · · · · · · · · · · · · · · ·	cm3/1000s.	:
Pressure hPa rack travel mm	9.00		
	: ← 0.20 T		
MEASUREMENT	1	STARTING FUEL DEL	IVERY
LICHOOKCHEN	1	Rated speed rpm	: 100
Rated speed rpm	: 1250	rack travel mm Tolerance mm	: 21.00 : + 0.50
Pressure hPa	: 265	Del. quantity	
rack travel mm	: 9.80	cm3/1000 strokes	: 176.0
Tolerance mm	: +- 0.15	Tolerance cm3/1000 strokes	: + 20.0
Pressure hPa	: 200 +	Check tolerance	_
rack travel mm	: 9.40 +	cm3/1000s.	: +- 25.0
Tolerance mm	: +- 0.15		
Start interlock		LOW IDLE	
Rated speed rpm	: > 100	COM TACE	
	< 395	Rated speed rpm	: 475
Nacea Speed (pil)	· · · · · · · · · · · · · · · · · · ·	Hatea opeca i piii	• • •

N14

Rack travel in mm Tolerance mm	: : +-	5.50 0. 10
Del. quantity cm3/1000 strokes Tolerance	:	26.5
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s.	: +-	5.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	4.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 05.03.98

Test oil : ISO 4113

Combination No. : 0 402 066 707AA

Injection pump

Pump designation : PES6P120A120RS3358

EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P2A618

Governer no.

: 0 421 833 513

Cust. part No. : 3934856

Customer-spec. information

Customer : CDC

Motor

: 6BTA ELITE

Power KW

: 136.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar :+ 1.0

Prestroke mm : 2.85

Tolerance mm

: +- 0.05

Check tolerance mm

: +- 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 6.75

Tolerance

: + 0.50

Check

tolerance 'NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.35

Tolerance mm : \leftarrow 0.05

N16

	+ Aneroid pressure
Del. quantity cm3/1000 strokes : 146.5	+ hPa : 1200 + Del. quantity
Tolerance	+ cm3/1000 strokes : 146.5 + Tolerance
cm3/1000 strokes : + 1.0	- cm3/1000 strokes : +- 1.0 - Check tolerance
Check tolerance cm3/1000s. : + 3.0	cm3/1000s. : + 3.0 - Spreed
	+ Tolerance
Spreed	cm3/1000 strokes : 4.0 Check tolerance
Tolerance cm3/1000 strokes : 4.0	- cm3/1000s. : 7.5
Check tolerance cm3/1000s. 7.5	CONTROL LEVER
	control lever
Rated speed rpm : 475	<pre>position degree : 103.0 tolerance degree : + 4.0</pre>
,	+
Rack travel in mm: 5.40	+ RATED SPEED
Tolerance mm : + 0.10 Del. quantity	rack travel mm : 10.30 Rated speed rpm : 1175
cm3/1000 strokes : 24.5	+ Rated speed rpm : 1175 + Tolerance 1/min : + 5
Tolerance	Total and it is
cm3/1000 strokes : + 2.0	+ rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1230
cm3/1000s. : $+$ 4.5	+
Spreed	+ rack travel mm : 0.85
Tolerance	Tolerance mm : +- 0.55
cm3/1000 strokes : 6.0 Check tolerance	Rated speed rpm : 1375
cm3/1000s. : 9.0	I
	-
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	+ control lever
GUIDE SLEEVE POSITION	position degree : 81.0
	Control lever difference
	+ Grad : 22.0
control lever	tolerance degree : + 6.0
position degree : - 3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.50	Rated speed rpm : 475
Tolerance mm : + 0.20	rack travel mm : 4.90
*	Tolerance mm : + 0.05
governor spring	+
pre-tension	+ Rated speed rpm : 100
click setting x : 3.75	+ + CRT mm min. :> 19.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
	+
Rated speed rpm : 1100	+ Rated speed rpm : 475

N17

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 11.35 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1200

Rated speed rpm : 500 Pressure hPa : rack travel mm : 9.20 Tolerance mm: +-0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 800 rack travel mm : 10.70 Tolerance mm : + 0.20

Pressure hPa : 545 rack travel mm : 9.75 Tolerance mm: + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 100.5

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : \leftarrow 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm: $\leftarrow 0.50$

Del. quantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

: **←** 25.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 475

Rack travel in mm : 5.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 24.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.02.98 Edition : ISO 4113 Test oil

Combination No. : 0 402 066 709AA

Injection pump

Pump designation : PES6P12DA12DRS3358 . EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P0A632

Governer no. : 0 421 833 539

Cust. part No. : 3934128

Customer-spec. information

Customer : CDC

: 6BTA ELITE Motor : 130.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance *C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 6.75 Tolerance : +- 0.50

Check

tolerance "NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.20 Tolerance mm : + 0.05

N19

Del. quantity +	Aneroid pressure
cm3/1000 strokes : 138.5	hPa : 1500
<u> </u>	Del. quantity
Tolerance	cm3/1000 strokes : 138.5
cm3/1000 strokes : + 1.0 +	Tolerance
+	cm3/1000 strokes : $+$ 1.0
Check tolerance	Check tolerance
cm3/1000s. : + 3.0	$cm3/1000s.$: \leftarrow 3.0
+	Spreed
Spreed	Tolerance
+	cm3/1000 strokes : 4.0
Tolerance +	Check tolerance
cm3/1000 strokes : 4.0	cm3/1000s. : 7.5
+	
Check tolerance +	
cm3/1000s. : 7.5	
	CONTROL LEVER
+	
+	control lever
Rated speed rpm : 475	position degree : 93.0
†	tolerance degree : +- 4.0
Rack travel in mm: 5.40	
Tolerance mm : + 0.20	RATED SPEED
Del. quantity +	rack travel mm : 10.20
cm3/1000 strokes : 24.5	Rated speed rpm : 1145
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0	
Check tolerance	rack travel mm : 5.70
cm3/1000s. : + 4.5	Rated speed rpm : 1230
Spreed	Tolerance 1/min : + 5
Tolerance	
cm3/1000 strokes : 6.0 +	rack travel mm : 0.85
Check tolerance +	Tolerance mm : - 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1400
<u> </u>	
+	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	I All MAI A
†	LOW IDLE
†	
CUIDE SLEDJE POSTITON	anning Lavian
GUIDE SLEEVE POSITION +	control lever
Ţ	position degree : 78.0
·	iniappine doctor ! - ' ''
control lever	tolerance degree : + 4.0
control lever	-
position degree : -3	Control lever difference
	Control lever difference Grad : 15.0
position degree : -3 Rated speed rpm : 800	Control lever difference
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50	Control lever difference Grad : 15.0 tolerance degree : + 6.0
position degree : -3 Rated speed rpm : 800	Control lever difference Grad : 15.0
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 4.90
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 4.90 Tolerance mm : + 0.10
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 4.90
position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 4.90 Tolerance mm : + 0.10 Rated speed rpm : 100
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 4.90 Tolerance mm : + 0.10
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25	Control lever difference Grad : 15.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 4.90 Tolerance mm : + 0.10 Rated speed rpm : 100

Rated speed rpm rack travel mm Tolerance mm	: 475 : 5.40 : + 0.20
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.20 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.00 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1500
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.30 : + 0.20
MEASUREMENT	
Ratted speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 975 : 11.50 : ← 0.20
Pressure hPa rack travel mma Tolerance mm	: 545 : 9.85 : + 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 750
Del. quantity cm3/1000 strokes Tolerance	: 170.0
cm3/1000 strokes Check tolerance	: + 3.0
cm3/1000s, Spreed Tolerance	: +- 6.0
cm3/1000 strokes	: 8.0

Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 500 : 100.5
cm3/1000 strckes Check tolerance cm3/1000s.	: ← 2.0 : ← 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 21.00 : + 0.50
cm3/1000 strokes Tolerance	: 165.0
cm3/1000 strokes Check tolerance cm3/1000s.	: + 20.0 : + 25.0
LOW IDLE	
Rated speed rpm	
Rack travel in mm Tolerance mm Del. quantity	5.40 : + 0.20
cm3/1000 strokes Tolerance	: 24.5
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: ← 4.5
	: 6.0
Check tolerance cm3/1000s.	: 9.0
End of test speci	fication sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.03.98 Test oil : ISO 4113

Combination No. : 0 402 734 801

Injection pump

Pump designation : PES4P120A120RS7313 .

EP type number : 0 412 724 801

Governor

Governer design. : RQV400...1250PA1113K

Governer no. : 0 421 815 376

Cust. part No. : 3926603

Customer—spec. information Customer : CDC Motor : 4BTA-A Power KW : 97.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : +-3.60 : + 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm: 12.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Tolerance : U-9U-18

Check

tolerance *NH : +- 0.75

Start of delivery blocking

5.75 *NW after s.o.d. :

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 14.85

Tolerance mm : + 0.05

	•
Del. quantity cm3/1000 strokes : 173.5	+ Toler + cm3/1 + Check
Tolerance cm3/1000 strokes : + 1.0	cm3/1 Spree
Check tolerance cm3/1000s. : + 4.0	- cm3/1 - Check - cm3/1
Spreed	
Tolerance cm3/1000 strokes : 8.0	CONTR
Check tolerance cm3/1000s. : 12.0	contr posit toler
	RATE
Rated speed rpm : 420	rack Rated
Rack travel in mm: 6.60 Tolerance mm : + 0.20	Toler
Del. quantity cm3/1000 strokes : 16.0 Tolerance	+ rack + Rated + Toler
cm3/1000 strokes : + 3.0 Check tolerance	+ rack
cm3/1000s. : +- 5.0 Spreed	+ Toler
Tolerance cm3/1000 strokes : 4.0 Check tolerance	<u>†</u>
cm3/1000s. : 8.0	LOW 1
(B) SETTING OF INJECTION PUMP	‡
WITH GOVERNOR	+ contr + posit + toler
GUIDE SLEEVE POSITION	Contr Grad toler
control lever position degree : MAx Rated speed rpm : 1475	Setti
	Rated
Rack travel in mma: 10.50 Tolerance mm : +- 1.50	F CRT n
FULL LOAD DELIVERY AT FULL LOAD STOP	Testi
Rated speed rpm : 1150	+ Rated
Aneroid pressure hPa : 1200	Toler
Del. quantity cm3/1000 strokes : 173.5	Rated

Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 1.0 : + 4.0 : 8.0 : 12.0
CONTROL LEVER	
control lever position degree tolerance degree	: 116.0 : + 6.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 13.40 : 1310 : +- 15
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1490 : + 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1550
LOW IDLE	
control lever position degree tolerance degree	: 71.5 : +- 6.0
Control lever dif Grad tolerance degree	: 45.5
Setting point w/o	ut bumper spring
Rated speed rpm	: 300
CRT mm min.	: > 7.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 420 : 6.60 : + 0.20

Rated speed rpm : 425

		→ Del. quantity
TORQUE CONTROL		+ Tolerance
Rated speed rpm	: 1150	+ cm3/1000 strokes : +- 3.0
rack travel mm	: 14.85	+ Check tolerance
Tolerance mm	: +- 0.05	+ cm3/1000s. : +- 6.0
		Spreed
Rated speed rpm	: 850	+ Tolerance
rack travel mm Tolerance mm	: 13.90	- cm3/1000 strokes : 8.0
Tolerance ma	: +- 0.20	+ Check tolerance
	3,20	- cm3/1000s. : 12.0
Rated speed rpm	: 1250	112.10
rack travel mm	: 14.40	
Tolerance mm		rack travel mm : 14.40
TOTAL GITTO IIII		+ Tolerance mm : + 0.20
		T roter drice intil
ANEROID/ALTITUDE		
COMPENSATOR TEST		Aneroid pressure
ANII MANIAL IFOI		+ hPa : -
		Rated speed rpm : 1150
CETTAN		
SETTING		+ Del. quantity
Dadoul amond	. 1150	cm3/1000 strokes : 82.0
Rated speed rpm Pressure hPa	: 1150	+ Tolerance
Pressure npa	: 1200	+ cm ³ /1000 strokes : $+$ 2.0
D-4-11	. 4450	† Check tolerance
Rated speed rpm		+ cm3/1000s. : $+$ 4.0
Pressure hPa rack travel mm		†
rack travel mm	: 10.50	†
Tolerance mm	: ← 0.20	
		+ STARTING FUEL DELIVERY
MEASUREMENT		†
		+ Set starting CRT at K-cam.
Rated speed rpm	: 1150	
		+
Pressure hPa		+ Rated speed rpm : 100
rack travel mm	: 13.20	Rated speed rpm : 100 rack travel mm : 12.80
Tolerance mm	: ← 0.20	+ Tolerance mm : +- 0.50
		+ Del. quantity
Pressure hPa	: 290	+ cm3/1000 strokes : 150.0
rack travel mm	: 11.50	+ Tolerance
Tolerance mm		- cm3/1000 strokes : +- 20.0
		- Check tolerance
Start interlock		
		1
Rated speed rpm	: > 100	1
Rated speed rpm	: < 315	
opcea (pili	515	LOW IDLE
Check		TOW TOCK
speed 1/min	: > 80	Rated speed rpm : 420
Check	. / 00	T naced speed (pill : 420
	: < 325	Rack travel in mam: 6.60
speed 1/min	. \ 30	
		+ Tolerance mm : +- 0.20
FIFE NOT TIPES.	ADAOTERICE	
FUEL DELIVERY CH	AKACIERISTICS	cm3/1000 strokes : 16.0
		† Tolerance
- ·		+ cm3/1000 strokes : + 3.0
Aneroid pressure		+ Check tolerance
hPa	: 1200	+ cm3/1000s. : $+$ 5.0
Rated speed rpm	: 850	+ Spreed
•		•

Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : 4.0

8.0